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MEDICAL PRIZE ESSAY.

We, the Subscribers, have carefully read an essay, bearing the motto "Ne quid falsi dicere audeat, ne quid veri non audeat." CICERO,—presented for the premium offered for the best *Essay on Dropsies*, to be published in the Medical Recorder. We are of opinion that it is creditable to the author; that its publication would subserve the interests of Medical Science, and that it is entitled to the proposed premium;* and we award it accordingly.

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ART. I.—*An Essay on Dropsy.* By JAMES CONQUEST CROSS, M. D., of Fayette Co. Kentucky.

"Ne quid falsi dicere audeat, ne quid veri non audeat." CICERO.

THE frequency of dropsy, and the marked character of its symptoms caused it to be a disease familiar to the physicians of the most remote and secluded times; but it is remarkable, that Hippocrates, who is usually so exact, should have examined this subject in so loose a manner, as to render what he has transmitted to us, radically deficient, confused, and unsatisfactory. His division is unnatural; his description of hydrothorax and ascites is imperfect; his therapeutics are in many respects dangerous, and cannot be adopted but with great caution and much circumspection; his advice on some occasions is absurd, and on others involves obvious and positive contradiction. When speaking of epidemics, sleep is recommended to hydropics, and in another place we are told that it is positively injurious. A number of the most drastic articles is enumerated without any information on the subject of their particular application. It must not be dissimulated, however, that Hippocrates originally observed, that a

* The premium is a silver cup of the value of fifty dollars.

humid atmosphere, marshy or fenny district, repeated and considerable hemorrhages, protracted diseases, hepatic and splenic congestions, were the ordinary causes of dropsy. We are also indebted to the illustrious patriarch of medicine, for remarking that a tuberculous condition of the lungs should be comprehended in the etiology of dropsy of the chest, and that an hydatidinous state of the liver should be noticed in enumerating the causes of dropsy of the abdomen. Physicians should not forget his excellent remarks on the gradual evacuation of the dropsical fluid, and those on the internal and external use of epispastics. Hippocrates should be studiously consulted on a very important indication, the utility of which he seems to have thoroughly comprehended. To those who are familiar with his writings it is unnecessary to say, I allude to exciting the action of the dermoid organ by the use of fumigations and especially by exercise. The merits and demerits of the dry regimen were by him perfectly understood; he neither parched his patients by an unsatisfied and progressively increasing thirst, nor inundated them with a Bacherian exuberance; he adopted a medium course which experience has evinced to be the most safe and successful mode of proceeding.

Erasistratus contended that dropsy invariably proceeded from an engorged state of the liver, and though manifestly erroneous, Samnonicus has espoused it, with the addition of the spleen, and more recently, Altomare, who was professor at Naples and afterwards at Rome, formally declared the cause of dropsy to be always in that organ. Erasistratus directing his attention exclusively to the liver, entirely disregarded the fluid accumulated in the cavities and proscribed paracentesis. His only indication was to correct or remove the supposed hepatic derangement, and this he endeavoured to effect, by various topical remedies, and sometimes by a surgical operation.

In every historical account of this disease, Asclepiades, should be respectfully noticed, for his sensible division of hydropic affections into acute and chronic, and for the correct line of demarcation, drawn by him, between those dropsies accompanied with, and those destitute of febrile excitement. On the score of practical improvement there is little inducement to study his writings, particularly those acquainted with the works of Hippocrates, as he has adopted and closely followed that original and clear sighted genius. For having detected an error committed by Erasistratus, he also deserves credit, for instead of making an autocrat of the

liver, and excluding paracentesis from the domain of surgery, we see him puncturing the abdominal parietes, an operation denounced upon purely speculative grounds by the physician of Antiochus.

Like Asclepiades, and also like himself on most occasions, Celsus has been satisfied with copying with little variation, the incorruptible master of medicine; he claims our regard, however, for having designated more clearly the principles that should guide us in the administration of remedies, and for having introduced a more practical division of dropsy than had been made by the mighty genius and judge of art.

Areteus stands distinguished among the ancients for his animated, vigorous, and correct description of the several varieties of dropsy. He watched like a faithful sentinel who knows not at what hour the enemy may come, dropsy, from the site of its primitive location through all its various stages, until the whole economy was inundated and overcome by a superabundant accumulation of hydropic serum. His accurate and close observation originally furnished us with a description of hydatids.

Galen is the first as far as we can ascertain who notices dropsy in the brain, and he does but little more than divide it into four species; the first consists in infiltration of the integuments of the head, the second in effusion under the pericranium or under the skull, the third between the brain and its membranes, and the fourth between its membranes and the cranium. With regard to the other species of dropsy, he has not done himself justice; his elaborate writings contain nothing worth commendation; he has added nothing of practical moment to the labours of his predecessors, and when we have stated he ascertained more perfectly than those who wrote before him the seat of dropsy, and pointed out more clearly and correctly the relation existing between hydatids and dropsy, we have given a summary of his claims and done him ample justice. Instead of contending like Erasistratus, that dropsy exclusively depends upon an engorged condition of the liver, he has shown that it recognises a multiplicity of causes.

Cœlius Aurelianus lived at a time when pathological anatomy was cultivated under much more favourable auspices than at any preceding period. He not only knew that lesions of the liver, but also that engorgements of the spleen, uterus, colon, and other bowels, were causes. From the various modes of treatment quoted by him from Asclepiades, Themison, Ptolomy, Thessalus, Soranus, &c., we learn that these

physicians were persuaded of the utility of puncturing the parietes of the dropsical cavity, and of the propriety of exciting the action of the cutaneous organ.

Aetius erroneously contended that dropsy always proceeds from a cold affection of the liver, but he more methodically arranged the materials furnished him by the Greek and Latin physicians, and first established the relation that naturally exists between dropsy and serous cachexy, which he has described just before the former, to serve as an introduction to the study of hydropic affections.

Alexander Trallianus is the first who pointed out the lungs as being involved in the formation of serous accumulations; the first who distinctly informs us that dropsy is accompanied by febrile excitement, the consequence of visceral inflammation, and that it is connected with a plethoric state of the blood-vessels, and he insists, therefore, earnestly upon the propriety of commencing the treatment with the lancet.

The Arabians treated dropsy with that laconism in description, and tediousness in therapeutic detail, which are the distinctive characteristics of the physicians of that school. We do not, however, observe in their works that ostentatious and confused display of remedies so prevalent in the majority of ancient authors, for although they have augmented the catalogue of anti-hydropic remedies, they have devoted much attention to their precise employment, and have distinguished with *much* acuteness, the particular species of dropsy and the proper period of the disease when a given article should be exhibited.

The preceding sketch may be considered as embracing very near, if not the whole amount of knowledge possessed by the profession on the subject of dropsies, for some time after the eventful and ever memorable epoch of the revival of letters. For those that directly succeeded that period, did little more than comment upon, and, in many respects, render more obscure and unintelligible the writings of the ancients; indeed medicine seems to have continued at a stand until the establishment of medical schools in Europe, for previously, physicians expended their time and employed their abilities in the extension of the doctrines of the ancients, and in endless and useless controversies upon points that had been litigated and abandoned, unsettled by them. The enlightened teachers in these learned *academies*, fully penetrated with the importance of facts and the utility of observation in medicine, directed their exclusive attention to the study of the history of disease, and to the morbid appearances after death. Com-

mencing with Felix Platee, who led the way in the investigation of disease, and Thomas Bartholini, whose researches in pathological anatomy, laid the foundation of the present much improved and beautiful superstructure, we meet with a long and enlightened succession of able authors, who figured either in the former or in the latter, and who, in the space of two centuries, have furnished more knowledge on the subject of dropsies, than had been accumulated by Greek, Latin, and Arabian physicians during the long lapse of a thousand years.

Dropsy may be defined a disease consisting in morbid exhalation, or diminished or suspended absorption, or both, with accumulation of serum in one or more of the cavities of the human body, with alteration of form, augmentation of volume, tension, weight of the part constituting the seat of the disease, compression of the adjacent organs and general derangement of the functions, especially the secretion of urine, which is remarkably diminished in quantity, sometimes entirely suspended, and much changed in its quality. This definition I conceive will enable us to form a general idea of dropsies, the particular species being distinguished by circumstances connected with the cavity, in which the hydropic fluid is situated, and the organs immediately under the compressing influence of the serum.

Etiology.—The causes of dropsy are very numerous, some being peculiar to particular species, but a large majority are common; we shall, therefore, in order to avoid repetition as much as possible, take a general view of them. Dropsy prevails in all climates without much regard to age or sex; those, however, of the lymphatic temperament, women, children and particularly the age of adolescence, seem to be most liable to it. It is endemic in low and humid districts; in the vicinity of lakes and rivers; in situations subject to inundation; in champaign countries, in the vicinity of mountains, and in humid and obscure apartments. It is thus that plants vegetating in the shade became pale, and if I may use the expression cachectic. A writer of high antiquity observes that the first rains that succeed a drought, accompanied by a cessation of wind and a change in the atmosphere, presages the occurrence of anasarca. The spring, says Frank, before a dry state of the weather is manifested, and the autumn when rainy and cold, are the most productive seasons of every species of dropsy. On the contrary, dry and temperate climates, elevated and mountainous situations are generally exempt from it, and contribute to its cure. Exposure, together with other unknown causes, perhaps a peculiar and inappreciable

atmospheric constitution, may render dropsy epidemic in certain countries, and occasion a particular species to predominate. Thus we are informed by Itard, that ascites and leucophlegmasia prevail epidemically in the marshes of the department of Vendee; by Romers, that hydrothorax and hydrocephalus upon the sides of the Andalousia; by Modier, that acute hydrocephalus is more common at Geneva than in any of the other European cities, and this is so true that Vieupeux has seen it in that city assume the character of an epidemic; and by Koempfer, that hydrocele is endemic on the coast of Malabar.

The causes connected with the above predisposing circumstances capable of producing dropsy are exceedingly numerous, but they have been by authors unnecessarily multiplied. In the tedious enumeration of causes to be found in most authors, the majority are equally productive agents of other diseases, and those that are especially instrumental in causing dropsy, have been so completely thrown into the back ground, that the causes common to most diseases seem to occupy the most prominent place in the picture and are thus made to impose upon the inexperienced as of the most importance; we shall therefore endeavour to confine ourselves to those, that are in some measure peculiar to dropsy, and entirely omit that host of agents, that belong as much to one disease as another, and which are sustained alone by analogy or a few insulated facts.

Thus the causes that shall specially receive attention, may be comprehended in the three following divisions. 1st, Lesions of the heart and blood-vessels; 2d, lesions of the organs embraced in the splanchnic cavities; 3d, vital and organic lesions of the exhalants and absorbents.

When Itard declares that there are no functional derangements more intimately interwoven with the etiology of dropsies than those of the heart and large blood-vessels, he advances nothing more than reason, and the experience of ages must fully sustain. Daily observation presents us with indubitable evidence, that it proceeds alike from a diminished and an increased quantity of blood; from a want of proportion in its constituent parts; from an obstacle to its unembarrassed motion; and from its increased momentum.

That a reduced amount of blood may produce dropsy, the danger of large and repeated hemorrhages, and frequent bleedings, most fully evinces. A disproportion in the constituent principles of the blood frequently proceeds from the cause just mentioned. Sometimes, and more frequently perhaps than is generally supposed, it is owing to an original

disposition, or is dependent upon some modification of sanguification. The protracted and enfeebling influence of a humid atmosphere; heavy aqueous potations in a short time, and when the body is inactive; vegetable and unnutritive food, are fully capable of occasioning this condition of the blood. The power of large quantities of water in producing this effect, is amply evinced by the observations of Willis, Meyserey, Ramazzini and Monro, and by the experiments of Schulze, and Hales, who succeeded in rendering animals hydropic, by filling the stomach or by injecting water into the veins. The same effect may be produced by long continued issues, which deprive the blood of an undue portion of gluten.

The obstacles that impede or hinder the motion of the blood are so numerous and difficult to remove, that they may be considered as the most frequent and obstinate of the causes of dropsy. The agency of organic lesions of the heart and large blood vessels, which includes aneurisms of these organs, contractions of their orifices, and ossifications of their valves, has been elegantly depicted by Corvisart. A polypus not only in the heart but even in the cavity of a vein, may have this effect, as we are well assured from the known influence of tumours, arterial aneurisms, abscesses, and scirrhus or steatomatous swellings in their vicinity. Bichat has endeavoured to invalidate this influence by denying that diseases of the liver, decidedly the most operative, have any power upon the vena cava. This is not, however, the only occasion on which that illustrious man has forgotten the experience of ages and the truisms of the art, in order, by fallacious reasoning, to give more stability and firmness to his own peculiar visions. Every cause of disease is reduced by him to modifications of his vital properties, and the obvious motive of this measure, was to enable him to explain by the action of these properties, the operations of the healthy economy. In contending against the mechanical influence of the liver, he affirms that the effects of compression are completely destroyed by the communication of the cavas through the vena azygos. Supposing these anastomoses as numerous as contended for, I would ask, can they shield the economy from the dangers of a protracted occlusion of the chief trunk? When a tumour in the hollow of the ham compresses the popliteal vein, the anastomoses existing between that vein and the great saphena does not protect the extremity from infiltration. The assertion of Bichat is rendered completely nugatory by the experiment of Lower, who produced at pleasure an accumulation of serum in the abdomen of a dog,

by throwing a ligature around the vena cava, close to the diaphragm.

Increased action of the heart and arteries, and an augmented amount of blood were, by the ancients, reckoned among the causes of dropsy. Hippocrates detracted blood, under the impression that dropsy sometimes proceeds from suppressed hemorrhoids; plethora was one of the causes assigned by Alexander Trallianus, and Serapion witnessed many cases of dropsy cured by antiphlogistics. This cause seems to have been generally known to the ancients, for Dion Cassius, who was not of the profession, attributes to it the dropsy that destroyed the emperor Trajan. In more modern times we find in the writings of Hildanus, that a young man was cured of a general anasarca by a hemorrhage from the nose, that amounted to four pounds, and Grapengiesser informs us that he has seen great relief arise from copious epistaxis. In the writings of the moderns, who have described dropsical affections, we discover from the symptoms, treatment, and denominations bestowed upon certain of its varieties, that increased action has a very active agency. Thus Hane speaks of the frequency of the pulse; Zimmerman, when relating the case of Frederick II. king of Prussia, who died of dropsy, says his pulse was hard and full; Rush informs us he has repeatedly found it in every variety of dropsy, full and hard, especially in the first stage; Itard has met with the same condition of the vascular system, and Frank speaks frequently from his own practice, and that of others, of a full, hard, and vibrating pulse. We have ourselves seen a case of fatal hydrothorax from inflammation of the lungs, with full, hard, and vibrating pulse, and which was considerably palliated by copious bleeding, and his life no doubt much protracted. Dropsy alternates frequently with diseases of high arterial excitement, as is evinced by the cases of Mead, Grimes, &c. Under this head it cannot be improper to notice chronic inflammation; this, as a prolific source of dropsy, was little observed and less known, until recently. Chronic inflammations are numerous, and not less mischievous than the acute; indeed we may, with propriety, assert them to be more so, for their existence being frequently unknown from the insidious character of their symptoms, their treatment is often neglected or unskilfully managed. They are most commonly seated in the lungs, liver, bowels, peritoneum, and sometimes in the eyes. It is at first difficult to detect them, unless they have succeeded the acute species, and particularly in the parenchymatous viscera. When seated in the bowels there

is not so much obscurity, but even here the least inattention may cause us to be deceived, for not unfrequently it puts on the livery of simple chylopoietic derangement, or of flatulent colic. When in the lungs it exhibits itself under the character of common catarrh, and frequently chronic inflammation proceeds from this affection, when neglected or unskilfully treated, and when inveterate it often degenerates into asthma, hydrothorax, tubercles of the lungs, and into phthisis. In this way chronic inflammation of the bowels terminates very frequently in obstinate constipation or diarrhœa and ascites. This kind of inflammation may invade the kidneys in calculous and gouty affections; it may attack the bladder, uterus, or peritoneum; and, according to existing circumstances, manifest itself under a great diversity of forms, and produce other and very different affections. Numerous examples of this kind may be found in the works of Baglivi, Morgagni, in Pinel's Nosographie, and in Broussais' Histoirie des Phlegmasies Chroniques; and it is highly necessary that the physician should be familiarly acquainted with them, as it is of the utmost importance to be able to distinguish those dropsies proceeding from them, from those that are primitive. Were it necessary, the antiphlogistic plan of treatment so successfully followed by physicians, might be here noticed in support of the general proposition contained in this paragraph, but as it will be fully detailed in another, and more appropriate place, we shall content ourselves at present with referring the reader to the treatment, and the inference to be drawn from it will appear obvious. The denominations bestowed upon certain varieties of the disease under consideration, betrays at once the sentiments of many authors concerning it, and which comports most perfectly with the opinion here advanced. Thus Boerhaave, following the ancients, speaks of acute, hot, or febrile dropsy; Stoll treats of plethoric dropsies; Brown and his disciples of sthenic and hypersthenic; Breschet of active; Grapengiesser De Hydrope Plethorico; Itard of acute; Frank of sthenic, and many others of inflammatory dropsy. The primary effect of fatiguing exercise, or of a violent febrile paroxysm, is an increase of the cutaneous and pulmonary perspiration. Under such circumstances there is undoubtedly an augmented exhalation in the great cavities; should absorption then be enfeebled or arrested by cold, repose, or sleep—should inflammation supervene and put an entire stop to it, a serous accumulation must be the unavoidable result. Active aneurism of the left ventricle of the heart acts in the same way; its morbid in-

crease of power enables it to propel the blood into the arteries with greater force, and being diffused throughout the capillary system exhalation is increased.

The morbid alterations of tissue which frequently take place and change the form of the organs contained in the great cavities, have been correctly regarded as among the most unequivocal causes capable of producing serous accumulations. The mode by which they produce this effect has not been very philosophically explained by the majority of authors; they have generally availed themselves of one of those ideas which has undeservedly survived the Boerhaavean physiology. It is supposed that effusion takes place because the obstructed organ is not permeable to the lymph imbibed by the mouths of the absorbents, without recollecting that this supposition equally affects the exhalants, and thus at once removes the pretended disproportion betwixt exhalation and absorption. In order to give a satisfactory elucidation of the part diseased viscera act in the production of dropsy, we must consider them as the seat of chronic inflammation, and recollect that every inflammation not removed by resolution, is accompanied in the affected organ, with a tendency to excretion, and which according to the peculiar character of the inflammation, will exhale serum, blood, or pus. In this condition the absorbent functions are enfeebled or entirely suspended, and those organs connected with the diseased viscus either by relations of sympathy or contiguity, participate in this tendency to exhalation. Visceral intumescence may arise independently of inflammation, but this is rare, and when it does I believe it to be exclusively dependent upon superabundant nutrition. Itard has thought it advisable to include in enlargements of this kind, indolent scirrhii, fibrous productions and tubercles, but we are persuaded he would have been more correct, had he considered them as the results of latent inflammation. They owe their existence evidently to morbid action, and the phenomena they reveal, as readily induce the belief of inflammation, as any other cause. When, however, over nutrition is accompanied by dropsy, the latter does not proceed from the intumescence, but they both arise from a common cause, from a pathological nutrition, which induces inhalation to predominate.

The mechanical action of obstructed organs upon the blood vessels, has been accused of causing dropsy; but this in its fullest extent is only app'icable to the liver. We observe that those enormous tumours of the epiploon, those of the ovaries, which continue for years, and that extensive and

troublesome repletion of the abdomen, in the last months of the most voluminous pregnancy, have but little influence in the production of dropsy. They may accompany or predispose to it, but they rarely, if ever, produce it, and we should be particularly careful to distinguish those that are only incidental, from those that are essentially connected with the serous accumulation. A distinction of this sort we shall find in practice of absolute importance, for unless we perfectly understand the kind of relation, existing between the diseased organ and the hydropic collection, we shall never be able to direct the treatment on scientific principles. This investigation will be sometimes involved in great difficulty, and will require the most persevering diligence to obtain a satisfactory result, but at others an attentive study of the progress of the disease, and the successive development of the symptoms, will readily offer a solution of the problem.

One class of organic diseases is generally confined to the production of serous effusion in the cavity containing the diseased viscus; the other lays under contribution the whole serous system, and produces almost immediately the hydropic diathesis. The former alone shall in this place engage our attention, the latter have already been noticed; they are affections of the heart and blood vessels. Diseases of the liver are a very fruitful source of dropsy; they almost invariably accompany this disease when it is of any considerable magnitude. In epidemic dropsies, this coincidence obtains, if possible, more generally than when it is sporadic, and also, as we are informed by Bartholin, in the *epizooties*, which produces much havock among horned animals. In the works of Morgagni and Lieutaud, we find but few instances of anasarca and ascites that do not depend upon some derangement of the liver; and numerous examples of hydrothorax are recorded by Bonet, Lessois, and Lieutaud, that arose from the same cause; and its frequent connexion with hydrocephalus has recently become a very popular opinion in England. The effusions and infiltrations arising from hepatic derangement, proceed, undoubtedly, not only from the obstruction it offers to the venous circulation, but also from some change in the quantity and quality of the biliary secretion, which is sometimes found aqueous, discoloured, insipid, and sometimes gelatinous. Atrophy, which is by no means a very uncommon disease, frequently terminates in dropsy.

Hoffman remarking that the functions and diseases of the uterine system were frequently disposed to produce serous collections, assures us that in hydropic females, the liver is

much less frequently affected than the organs of generation. This is perhaps the reason why he attributes to them a greater liability to dropsy, at least to ascites, than males, for they are not more subject than the latter to hydrothorax and hydrocephalus.

Hydatids have been supposed to be a very prolific source of dropsy, but before we examine them in this respect, we should say something of their formation. Our information on this subject is derived from naturalists, such as Linneus, Pallas, Bloch, &c., for what has been said of them by physicians is mainly *erroneous*. These vesicles, which vary exceedingly in size, are owing to, or rather constitute a part of an insect, which Pallas has described with great correctness, and which Bloch has denominated vermis vesicularis crimita in his memoir on worms and anthelmintics. These vesicles have been supposed particularly instrumental in the production of dropsy generally, and when they are ruptured, they immediately become the source of a peculiar dropsy, denominated hydatidinous. This hypothesis is not of modern invention, but was, as we are told by Galen, known even to Hippocrates, and adopted by all antiquity. The illustrious Morgagni developed this doctrine with much ingenuity and skill, and his researches have contributed in no inconsiderable degree to give it the currency it has had with the moderns. Though considerable coincidence has been pointed out between hydatids and dropsy, we do not think it has been clearly proved, that a rupture of these vesicles can produce the hydropic fluid in which they are frequently found. It appears more rational to suppose, that both the former and the latter are dependent upon the same cause; that they proceed from the same morbid state which affects at the same time the serous membranes and the organ in which they are developed. If the serous membrane were in a healthy state, it cannot be doubted but that the fluid poured out from these ruptured vesicles, would be absorbed immediately, as happens sometimes when they are accidentally opened. Encysted dropsies have been cured when a rupture of the cyst has permitted the water they contained to escape into the cavity of the abdomen, from whence it was soon absorbed without having occasioned any inconvenience. In such instances the serous membrane has been healthy, and the absorbents in full possession of their natural activity. When the serous membrane is diseased, and when the absorbents no longer, or but feebly perform their functions, the fluid progressively increases, and when, after death, many vesicles are found ruptured, it is erroneously sup-

posed, that they alone have been instrumental in the production of the dropsy. The fact of hydatids being found in post mortem examinations, sometimes destroyed, empty, and ruptured, without the existence of the smallest conceivable quantity of dropsical serum, is conclusive evidence, that they have no essential agency in the production of serous accumulations in the great cavities.

Vital and organic lesions of the exhalants and absorbents.—Exhalation is a natural function; when moderate it lubricates the surfaces of the organs, and ensures the integrity of their functions; when excessive, it constitutes disease and becomes particularly injurious. It is antagonised by absorption, and when the equilibrium between them is destroyed from excess in the former, or diminution or suspension of the latter, disease invariably ensues.

Many hydropic phenomena are entirely inexplicable on any other principles than those of the exhalants and absorbents; their anatomy, functions and vital properties should be thoroughly understood in order to comprehend fully the nature of dropsy; such details at this time would extend this essay beyond the limits assigned us; we shall therefore, confine our attention to a single physiological point, too important to be omitted. I allude to the marked disproportion originally noticed by Wepfer, between the fluids absorbed, and the vessels destined to conduct them into the circulation. We cannot admit the opinion espoused by a great majority of physiologists, that the thoracic duct is the only debouche of all the fluids that traverse the absorbing system, to be poured into the circulation. This opinion must appear quite untenable, when we reflect that the absorbents are exceedingly numerous, that they open upon all the surfaces, render the fluids from all the cavities, and constitute an important and indispensable element in every tissue. If the thoracic duct were the only outlet of the absorbing system, the mass of venous blood would be augmented only between the point where the thoracic duct empties its contents into the subclavian vein and the heart. But this is not the fact; Ribes assures us that the amount of venous blood is increased equally throughout the venous system. If we compare all the mouths through which the secretions from the arterial blood pass, with the embouchures of the two lymphatic trunks, through which it is supposed all the materials pass to supply the loss sustained by the blood; we shall see that if they were the only channels through which it could receive augmentation, the circulating fluid progressively diminishing from a want of a competent

supply. This consideration is additional proof of the necessity there is for the greater part of the absorbed fluids passing directly into the venous circulation, without travelling the circuitous rout of the thoracic duct. The varieties of blood found in the veins generally, and in the vena porta particularly, is no slender argument in favour of this opinion; and evinces also that these vessels receive at the different surfaces, or from the interior of the organs, a multitude of different materials which renders the blood of one part different in some respect from that of another. The lymph or chyle never presents such numerous varieties, nor such discrepant qualities. Of all the fluids they manifest less distinctly and less frequently, the characters of the absorbed substances; while in the veins these substances are discovered in all their integrity, without having undergone any alteration. Pus has frequently been found in the veins without the occurrence of any circumstance tending to induce the presumption that it had resulted from inflammation of these vessels; on the contrary, the existence of an abscess in the vicinity has always offered the fairest, and most satisfactory solution of its presence in the veins. We are informed by Alard, that in a female who died of peritonitis, almost all the veins of the abdomen were filled with a purulent sanies; Chaussier has frequently detected a sanious matter in the veins of the abdominal viscera; and Ribes has observed pus, mingled with the blood, when it had even to all appearance circulated some time with that fluid; he also discerned many shining particles swimming in the blood that were found to be globules of fat. This ingenious writer assures us, that he has never observed any thing of the kind in the arteries or in the lymphatics, though he has devoted much attention to these vessels. These facts tend in no inconsiderable degree to justify Duplau in his attempt to separate or distinguish the lymphatics from the absorbents, which idea is further still sustained, by the fact first observed by Cullen, and much insisted on by Bichat, that dropsies being morbid affections of the absorbing system, are rarely accompanied by engorgements of the lymphatic ganglions.

Admitting the materials absorbed to pass directly into the veins, a second difficulty arises as to the particular vessels instrumental in producing this effect. Do the veins themselves absorb, or are there absorbents that empty into the veins? The former of these opinions may be traced as far back as the time of Hippocrates, and was predicated upon the most perishable of al ldata—anatomical ignorance. At that

period nothing was known of the existence of lymphatics, and for centuries afterwards, but few discoveries were made in microscopic anatomy. The discovery of this order of vessels completely overturned for a time, the opinion espousing venous absorption; but notwithstanding the deadly assault made against it, by the united and resistless exertions of the two Hunters, Cruikshank, Mascagni and Desgenettes, it has again been awakened from its long and almost forgotten sleep, by Flandrin and Magendie who have brought forward additional evidence in support of that formerly adduced by Haller, Boerhaave and Monro. The imposing evidence recently urged, has not however, been able to convince us, that tissues radically different in their organization and possessing vital properties totally unlike, can perform identically the same functions. The difference existing between the veins and lymphatics in these two important respects, is too obvious to require proof. It is an axiom as firmly fixed as any principle of the healing art, that difference of tissue invariably gives birth to different vital properties and functions. This fact alone is sufficient most effectually to put to eternal sleep, this revived, but erroneous doctrine, and an explanation of many hydropic phenomena supposed to have been elucidated by venous absorption must be sought elsewhere, and Flandrin and Magendie must find some other solution of their experiments.

That there is a class of absorbents, separate and distinct from the lymphatics, and that they terminate directly in the veins, the following facts I think will most conclusively prove. Cruikshank remarks, that there is not an anatomist skilled in the art of injecting the arteries and veins, who has not, by injecting these vessels, filled also the lymphatics. He often succeeded in injecting the thoracic duct and many lymphatics, through the umbilical vein of children. Treed says, that when he poured mercury into the thoracic duct, it passed first into the veins of the brain, and afterwards into the arteries of the pia mater. Haller, in his great work on physiology, not satisfied with giving his assent to the statements of Treed and many other anatomists, who contended that absorbents terminate in the veins, asserts that he has witnessed them all himself. Ribes tells us that he long suspected that lymphatics existed in the medulla of the bones, absorbed the marrow, and terminated in the veins; and he declares, that experience fully verified his conjecture; for by injecting the hepatic veins, he succeeded in filling the superficial lymphatics of the liver. This experiment frequently repeated, and always with the same result, demonstrates clearly that

all the absorbents do not terminate in the thoracic duct. If to this we add that Vieussens has seen vessels of this kind terminate in veins; that Senac admits their existence, for he carefully distinguishes them from those that go to the thoracic duct; that numerous communications have been pointed out between the venous and lymphatic systems by Highmore, Wepfer, Stenon, Nuck, Ruysch and many other distinguished anatomists, it will be difficult, if not impossible, not to adopt the opinion that there are really vessels different from the veins, and which directly terminate in them, and which has induced physiologists to contend for the absorption of the veins. Moreover the most recent researches in anatomy, and those too executed by the ablest men living, confirm to the fullest extent what had been long since discovered, but what had almost been lost to the profession by incredulity, indolence, or ignorance. Thus Fohmann, Rossi, and Lippi, three of the most indefatigable anatomists of the present age, have clearly and incontestibly evinced, that the lymphatics directly communicate with the veins. We, therefore, consider ourselves justified in saying that the veins are entirely destitute of that power of absorption by which the debris of the solids, or the superfluous fluids contained in the different vascular and parenchymatous tissues, are conducted into the circulation; that the absorbents terminating in the veins, enjoy a very considerable, if not an exclusive agency; and that that portion of the absorbing system, emphatically denominated lymphatic, is destined entirely to convey the chyle formed by the chyme and lymph into the subclavian vein. It appears, therefore, indispensably necessary in the consideration of dropsies, to divide the absorbing system into two parts, one of which is very little if at all, concerned in the production or cure of it, while the other is almost alone instrumental.

By contemplating the absorbing system in this way, we are enabled to explain (and in no other way,) the rapidity with which large quantities of water are carried from the intestinal tube to the urinary bladder; the sudden transmission of water absorbed by the skin from a bath to the same organ; how nervous diseases, the first stage of fever, the impression of cold air, unexpected and sudden alarm, and strong mental emotions, can produce suddenly so abundant an evacuation of urine as to be entirely inexplicable by supposing it to have passed through the vascular system with the blood; can alone enable us to comprehend how asparagus, the nitrate and prussiate of potash, imparts in a very short time to the urine, evidence of their existence in it,

without being discoverable, at least in that portion of the venous blood detracted from the arm; can alone explain how a fluid possessing odoriferous properties, when injected into the cavity of the abdomen, can manifest itself in the venous blood, and how a similar fluid poured into the bowels can penetrate into the lacteals, while no evidence of its existence can be found in the veins; how milk acquires the odour and other characteristic properties of the food used, while the blood and other secretions formed by the same elements, have neither the same odour nor the same properties; how milk or water mixed with the essence of turpentine, introduced into a wound of the integuments, can penetrate into the valvular lymphatics and not into the veins, and how the upas tieuté inserted in the same manner can, on the contrary, rapidly penetrate into the veins as has been recently proved by Magendie.

These physiological preliminaries being settled, we shall be better prepared to enter upon the study of the nature of dropsies.

The particular manner in which the equilibrium between exhalation and absorption is broken up, has not been hitherto very satisfactorily explained; nor can this part of the etiology of dropsy be divested of its obscurity, while so little is known of the modifications which the vital properties of the exhalants and absorbents may sustain. That the exhalants are not in a state of debility, as has been asserted by many authors, we are fully persuaded; but the great difficulty with us, appears to arise from our ignorance of the diseases of the absorbing system, and this is the real cause why the pathology of dropsies seems to be involved in so much obscurity. With regard to the particular condition of the exhalants we think we shall not meet with much difficulty in establishing, that so far from their being enfeebled, they are in a high state of excitement. In erysipelas, the irritation of the exhalants seems to be more confined than in dropsy, but the result of their morbid action in such circumstances, bears so striking an analogy with that of dropsy, we cannot but be convinced that they are exactly in the same condition in these two diseases. Erysipelas is evidently an inflammatory affection, and imparts such a modification to the vital properties of the exhalants as to induce them to pour out a morbid superabundance of serum, which is accumulated under the epidermis, exhaled in the form of perspiration, disseminated into the cellular tissue, and after the febrile paroxysm has subsided, is expelled by the urinary bladder in the form of

urine. The inflammation excited in the exhalants by the application of a blister, produces, though in a smaller way, the same effects that are so obvious in erysipelas; the exhalation of a superabundant quantity of serum, and as long as they are under the influence of the stimulus of the blister, will not cease to produce this effect. To a similar state of the exhalants, but of a more moderate degree, may be attributed those exuberant and periodical sweats to which some individuals are subject; the matter of setons and issues is also the result of inflammatory irritation. The separation of serum from the blood in a state of health is never the effect of debility; it presupposes vital excitement, which is incompatible with that physical transudation by which it has been explained by some authors, and by following up this mechanical thought, they have contended that dropsy is nothing more than a weakened state of the exhalants, by which they pour out an excessive quantity of serum. But the instances above alluded to, show the exhalants in a high inflammatory state of excitement, and at the same time producing the same result that was supposed to proceed from laxity. Can it be supposed then, that increased exhalation can proceed from two such opposite states? I think not. The analogy between dropsy and inflammation is too close to admit of it; we find that dropsy is too common a result of inflammation, not to be persuaded that there is considerable identity between that state of system which produces the former, and that which constitutes the latter. Nothing is more common than effusion in the chest after inflammation of the pleura or lungs; and dropsy in the abdomen after inflammation of the bowels or peritoneum. Inflammation most frequently attacks those of the sanguine temperament, and in them exhalation is effected with most ease, and has a greater tendency to become morbidly abundant; the young, robust, and athletic, are alike the peculiar subjects of dropsy and inflammation; and we observe these diseases to be peculiarly prevalent in women between the forty-fifth and fiftieth years, during the plethora that generally succeeds the cessation of the menses. We see dropsy very common in those individuals who have been accustomed to any hemorrhagic discharge, and which has been intentionally or accidentally suppressed; such individuals are also very liable to inflammations. Excessive exhalation in some instances has followed, and alternated with or entirely superseded hemorrhagies. Inflammatory diseases of the skin, by transferring the irritation to the exhalants of the serous membranes of the great cavities, frequently give rise

to dropsy: such are scarlatina, measles, &c. The same causes productive of inflammation excite serous exhalation. Thus Banaillon remarks, that a draught of cold water, while the body is heated, is equally as operative in the production of hydrothorax or ascites, as peripneumonia, gastritis, or enteritis; that an individual suddenly exposed to the impression of cold, is as apt to be attacked by anasarca as by fever. The attention which physicians have recently paid to the etiology of disease, has enabled them to discover that there are many active serous exhalations and inflammatory affections that arise from the same causes, and require a similar treatment. Very few have not observed something of this kind. Thus there are inflammatory dropsies which are peculiarly apt to be accompanied by erysipelatous affections; dropsies connected with high febrile excitement, dry skin, pungent, tegumentous, and internal heat, excessive thirst, and dry tongue, which cannot be cured, nor in the smallest degree palliated, but by the prompt, decisive, and frequently repeated use of the lancet. There are varieties of febrile œdema appearing under the tertian form, which augment in a short time, the volume of the body to a most incredible size, and which can be reduced by vigorous antiphlogistic measures only. These facts, together with many others to be found in the writings of Sporcius, Hoffman, Stoll, Deidier, Mead, Monro, Cruikshank, Bacher, Rush, Abercrombie, &c., in all of which we see dropsies cured by copious bleeding, convinces us that dropsy, so far from consisting in feebleness of the solids, by which the hydropic serum is permitted to transude, is a disease in many instances highly inflammatory, and in all of excitement. Though we believe that there is a species of dropsy justly entitled to the name of inflammatory, and which we shall, in conformity to several other writers, denominate acute, there is another which proceeds from a less manifest and intense stimulus, and which embraces a class of dropsies which we shall treat of under the name of chronic.

It is true, that the majority of dropsical affections are not associated with the immoderate action just spoken of, and it is equally true, that no dropsy arises from absolute debility. I am induced to regard chronic dropsies as depending upon a certain degree of excitement of the vital properties of the exhalants, which is but little superior to that constituting health. This may be considered as the most moderate degree of irritation, which those vessels capable of producing dropsy, are in the habit of experiencing; it is, however, a true irrita-

tion, and if it should seem to involve the idea of debility, it is relative only, not absolute, and arises from a comparison drawn in the mind, between it and those more violent and inflammatory irritations, of which the exhalants are sometimes the seat; and which constitutes acute dropsy. This irritation may be classed among those indispositions that manifest a number of symptoms which denotes that there exists in the economy, morbid increase of action, without declaring its particular kind. I allude to those morbid changes which take place in the absorbing system, by virtue of which they transport fluids, sometimes from the cutaneous and mucous surfaces to the cells of the cellular tissue; sometimes, from the latter to the former, from whence they are exhaled in the form of sweat, colliquative diarrhœa, and in great abundance into the great cavities. This determination of fluids to different parts, and the exertion the exhalants make in pouring them upon certain surfaces, or into the cavities, is directly hostile to the opinion attributing serous exhalation to debility. If this were otherwise, the manner in which chronic diseases terminate in dropsy, would be entirely inexplicable.

If the vital alterations of the exhalants are obscure and difficult to understand, those of the absorbents are still more so. Those who have attempted to determine the agency they have in the formation of serous congestions, have, alternately accused them of spasm and debility. This spasm and laxity of the absorbents, is nothing more than the doctrine of Themison revived and new modelled by the adoption of new terms. Believing, as we do, that the absorbents alone very rarely, if ever produce dropsy, and that their astriction is generally an effect only of the morbid excitement of the exhalants, we are disposed to deny that debility is at all instrumental in the production of this disease, or in retarding its cure. The ostensible reason why hydropic serum is not removed from the cavities as fast as it is exhaled, is, that the irritation of the exhalants extending its influence to the absorbents, produces in them a state of astriction, which diminishes or entirely suspends their functions. This is what takes place as we are informed by Hunter in inflammatory and hemorrhagic congestions. We therefore, from the view we have taken of the exhalants in dropsical affections, feel ourselves justified in supposing, that a similar morbid state obtains in the absorbents in the formation of serous congestions, particularly since there is so striking an analogy between the causes of these diseases. We know how exceedingly efficacious antiphlogistic means are, in reducing inflammation and

in increasing absorption, and how stimulants when they have not been premised by depletion, diminish absorption, and increase exhalation. Antispasmodics alone, have when administered at the proper time, completely removed the astriction of the absorbents, and have contributed much to the cure of the disease. This astriction is sometimes so great and so long continued, that though the depletion requisite to reduce the excited state of the exhalants, may have completely fulfilled this indication, and thus have removed the cause of the astriction; yet it may still continue, and offer a considerable obstacle to the cure. This, we feel convinced, is one of the reasons why depletion has sometimes failed, and a remedy of trifling importance exhibited immediately afterwards, perfectly succeeded. Mead records an interesting and instructive case of this kind, in which a small dose of opium removed the dropsy, after the most vigorous means had failed, and this teaches us the vanity of endeavouring to cure dropsy by correcting the morbid state of the exhalants alone, for unless we can by a proper union of our remediate means, induce the absorbents to absorb, as we diminish morbid exhalation, we shall rarely be successful in the treatment of this disease. In hydropic diseases when the absorbents refuse to remove the product of exhalation, there occurs exactly what takes place in every variety of general or local plethora, and cachexy; in every fluid accumulated or stagnant in the cavities of the human body, and which is imperfectly absorbed. In the former, the collection is greater than in the latter; but this is referable alone to the extent and nature of the cavities in which they are located.

The organic lesions of the absorbents capable of producing dropsy, are not numerous, and those that have been mentioned do not merit much confidence. Thus, it has been asserted that it may be occasioned by a rupture of the thoracic duct, or a large lymphatic. The most frequently quoted observation of this kind, is that recorded by Willis and Lower, but it is difficult to believe that the simple rupture of a vessel of the size of the thoracic duct can pour out drop by drop a sufficient quantity of chyle to produce dropsy of the chest. More regard is due Bass for what he says of a man from whose chest he extracted a considerable quantity of a chylous fluid. Near the third or fourth dorsal vertebra he observed a small orifice in the thoracic duct, from which the chyle escaped, and from which also issued the air with which he attempted to inflate it. Ross has recorded a similar case, but if such ruptures do give rise to dropsy it must be exceedingly rare.

Appearances on Dissection.—Among the evidences of disease presented on the dissection of those who have fallen victims to dropsy, the most common is a fluid accumulated in the cavity constituting the affection, possessing many if not all the attributes of the serum of the blood from which it was originally separated. The honour is due Hewson, for having first discovered the identity existing between these two fluids, which has since been confirmed by the analysis instituted by Wurzer and Bostock. Thus, they are both composed of water, albumen, gelatine, hydrogen, sulphur, phosphate of lime and soda, and the muriate of soda. Hydropic serum is unlike the serum of the blood in containing an amount of mucus not found in the latter. This is the common character of the hydropic fluid generally, but that of hydrocephalus differs from it in the following respects; it is more limpid and transparent, it contains less coagulable lymph and frequently none at all.

Limpid dropsical collections have alone been subjected to analysis, and we are, therefore, in a great measure unacquainted with the elements of those that differ from the above, in colour, consistence, and odour, so that we may reasonably conclude they differ principally in the quantity of their constituent principles. Some of these deficiencies may also be supposed to depend upon the cavity in which the fluid is seated; thus the water of hydrocephalus contains so small a quantity of albumen, that neither alcohol nor heat coagulates it, while on the contrary, it is much more abundant in hydrothorax, and is easily coagulated.

Hewson made an unsuccessful attempt to establish an identity between serum and lymph; but it is only necessary to contemplate the latter as the detruitus of the organs, exhibiting different shades of character in the different parts through which it has to pass, in order to be convinced of the absurdity of the effort. Lymph can only be procured in sufficient quantity for analysis from the larger lymphatics, and an argument built upon this circumstance, might be objected to with great propriety, but that which has been examined was found analogous to the chyle, and essentially different from serum. The analysis of it made by Emet of Berne, and by Vauquelin to show its great coagulability and which was found to take place when exposed to the influence of common atmospheric air, is alone sufficient, to prevent us hereafter from confounding serous accumulations with effusions of lymph or chyle. A more perfect identity has been established between the serum of blisters and that of dropsy, and this analogy reflects con-

siderable light upon the most obscure part of hydropic etiology.

In general, therefore, the serum of dropsy may be considered as a limpid, inodorous, sensibly saltish, and lemon coloured or considerably limpid fluid. These physical attributes however, appertain more particularly to idiopathic dropsy, or those that are neither caused, nor accompanied by lesions of the viscera. When these characteristics are observed to belong to the fluid evacuated by puncturing the parietes of the dropsical cavity, they should be considered as data upon which to predicate a favourable termination of the disease, for when diseased viscera are associated with dropsy, the serum is lactescent, containing flakes of coagulable lymph, and resembles in many respects a purulent fluid. Sylvius found it possessing acrimonious qualities, to which he attributed the erosion of the pleura and lungs, observed upon dissection. It is sometimes yellow, orange, greenish, whitish, blackish; it is sometimes inspissated and difficult to be evacuated through the canula; it contains false membranous lamina, polypous filaments, and sometimes resembles a demi-gelatinous fluid, or the albumen of the egg. In certain cases it presents a whitish brown colour which seems to betray the presence of corrupted blood; at other times it evidently contains pure blood in considerable quantity which escapes through the canula without any vessel having been wounded in the operation. It has been found bitter, sweet, and Duverney observed it of the colour and taste of milk; and Corvisart in one instance discovered it to be converted into an albuminous mass. Whatever may be the colour, consistence, savour, odour, the action of fire, oxygen, and the mineral acids coagulates the albuminous part, and occasions a precipitate. Though these deviations from the usual character of hydropic serum, may be generally taken as evidence of visceral disease, we are taught by a few recent pathological facts, not to esteem them as invariably diagnostic; for this fluid has been found feculent, inspissated, and puriform without any disease of the solids. We are told by Itard, that a case of this kind came under his observation; by Capuron, that he has seen a puriform or sero-puriform collection, without any trace of inflammation, and by M'Lachlan of a purulent ascites radically cured by tapping, which could not have been associated with any visceral disease, or this operation would have been palliative only.

The organic lesions observed in the examination of hydropics are numerous and diversified; but we shall confine

ourselves to those alone that are most prevalent. Thus the cellular surface of the sac or cavity containing the serum, is always infiltrated, and this infiltration embraces the adjacent cellular tissue. The serum is frequently insinuated into the interstices of the most dense membranes, and divides them into exceedingly delicate lamina. Soemmering has found it engorging the medullary cavity of the bones; this distinguished man together with Morgagni, Mascagni, Portal and Bichat, have observed it distending the large lymphatics in the vicinity of the collection, to such a degree as to give them a varicose appearance. The same phenomenon has been observed in hydropic sheep, by Lower; but as Cullen and Bichat have observed, this condition of the lymphatics in the human subject is exceedingly rare. Morgagni on two occasions has seen the great lymphatics entirely obliterated.

Organic affections of the liver accompany as cause or effect at least two thirds of the whole number of dropsical affections, those of the head not excepted. It is sometimes pallid, or interspersed with extensive ash-coloured spots, which are impermeable to the blood; it is frequently tumefied, tuberculated, congested with blood, sometimes scirrhus, shrivelled and filled with hydatids. Hepatic derangement invariably accompanies those dropsies that proceed from intermittent fever, and those that occur in miasmatic districts. In a case of anasarca the liver was found by Itard cancerous.

The brain offers many morbid appearances. The sinuses of the dura-mater and blood-vessels spread upon the brain are excessively congested, and it is not uncommon to find them distended by an æriform fluid, as is sometimes observed in apolectics. The substance of the brain is often softened, but more frequently hardened, and its external surface is sometimes found covered with a layer of pus, or a transparent exudation shining as if it were varnished. Tuberculous granulations have been found by Laennec in the cerebrum and cerebellum and even in the meninges. He has also observed the brain flattened, and its convolutions effaced. This organ is not however always diseased in hydrocephalus acutus; Mattkey and Vieupeux found it perfectly healthy, in some of those who fell victims to the epidemic that prevailed at Geneva; this circumstance has also been observed by Itard and Cheyne.

The marks of disease observed in those who die of the chronic hydrocephalus which has afflicted them from birth, or attacked them a short time afterwards, are more singular. Generally entire bones are wanting or present unnatural

divisions. The sutures are rarely if ever ossified, even when they have survived some years; they are commonly filled with a fibrous substance, or several supernumerary bones. When the fœtus has perished from extravasation in the brain, the bones of the skull irregularly overlap each other, and the head presents nothing more than an osseous membrane, destitute of a cavity. Such was the character of the head of a fœtus seven months old, dissected by Hanius in 1665. The brain is sometimes transformed into a membrane, expanded in all directions and forming a kind of lining to the cranium, and it sometimes projects into those hydropic sacs found at its exterior. To these facts derived from Wepfer, Morgagni, Camper and Monro, we should subjoin that the brain has been observed by Tulpius, entirely disorganised; that the whole encephalon has been found dissolved into a species of pap, of little consistence, with hydatids floating in it; and that Morgagni has seen these vesicular bodies so numerous that there remained no trace of hair. This celebrated anatomist cites also many examples of the complete dissolution of the brain and spinal marrow.

The organic affections found in the thorax, are enlargement or polypi of the heart, ossification or erosion of its valves, aneurismatic dilatation or ossification of the aorta, tubercles or auricles in the lungs, thickening of the pleura, and adhesions of the pericardium to the heart.

Dropsies may be divided into serous, mucous, and encysted; but as the serous are infinitely the most common, and as it would fill a volume rather than a short essay, to treat even in a cursory manner of the whole of them, we have determined to exclude the mucous and encysted altogether. On the subject of serous dropsies we shall in conformity to the ancient division which has been in modern times adopted by Itard, divide them into acute and chronic, idiopathic and symptomatic. This division is understood with less difficulty, and will afford us facilities in the treatment of the different varieties presented by no other; conceiving that these two circumstances should constitute the essential object of every good classification, we have adopted it without hesitation. The distinctive characters of these varieties of dropsy do not however, always accompany, and when they do, they are not always very manifest. Thus the diminution in the quantity of urine, one of the most invariable symptoms of dropsies generally, sometimes continues to be evacuated as abundantly as in health; instead of constipation, the bowels are frequently soluble; instead of thirst, Frank says he has seen

many individuals, who under the apprehension of augmenting the hydropic effusion, have abstained almost entirely from every kind of beverage without experiencing any inconvenience from it; fluctuation cannot always be detected, and frequently when the most experienced physicians and surgeons have imagined they could feel it, not the slightest effusion could be discovered after death; Frank quotes a case from the practice of a French physician, in which fluctuation of the abdomen appeared manifest, but which was occasioned by gas distending the stomach; he remarks also that a young Parisean practitioner punctured the abdomen of a woman, who he believed would die of ascites, but when he retracted the trocar, a large quantity of very fetid air escaped through the canula; the abdomen subsided, and there existed in the concave surface of the liver, a deep ulcer, which was no doubt the source of this morbid secretion. From his own personal experience he states that he was called in consultation to a man of Heidelberg, who had been for a very considerable length of time subject to flatulency, and who was supposed to labour under hydrothorax. He died soon afterwards, but no evidence of disease could be found, but in the intestinal tube which was filled with air. Frank further remarks, that he was acquainted with a woman who from her infancy had been afflicted from the slightest agitation, with a noise in the chest and abdomen, which would have deceived the most experienced ear, not acquainted with her idiosyncrasy. Morgagni speaks of an individual who died of hydrothorax without having experienced any dyspnœa, or any difficulty in reposing upon either side; Scott records a case of hydrothorax which manifested no symptom of its existence until an hour before death; Wepfer tells us of a young man who died of this disease, who found no difficulty in respiring in lying horizontally nor in running, and Frank says he has frequently seen respiration completely unembarrassed, notwithstanding the abdomen was enormously distended with water.

The division I have adopted is applicable to every variety of serous dropsy, I shall therefore in order to avoid repetition, give a general view of acute dropsy, then in a successive manner a particular description of each species. In the description of chronic dropsy, I shall pursue the same course.

Acute Dropsy.—Thus acute dropsy discloses itself suddenly, progresses rapidly, attacks young, robust and plethoric individuals, and reveals a full, hard and sometimes vibrating pulse. Painful, embarrassed respiration, restlessness, watchfulness, and pains in the extremities; continued fever, commencing in the inflammatory type, and in a few days putting

on the adynamic character. All the symptoms especially in the debut are of the sthenic character; the countenance is animated and expressive, skin hot, thirst great, obscure and sometimes intense, internal pains, and the whloe body labours under very unpleasant tension. The cavity in which the effusion takes place is in a short time filled, and rapidly distended, if it should be susceptible of it. In cellular dropsy the tumefaction is rose coloured, harder, and though receiving the impression of the finger does not retain it so long as when the disease is chronic. In fine, every circumstance associated with acute dropsy indicates that its proximate cause is inflammatory excitement of the exhalants, and consequently a superabundant exhalation of the serum. The astricted state of the absorbents being the effect only of the morbid condition of the exhalants.

Idiopathic acute, is distinguished from symptomatic acute dropsy, by existing independently of visceral or membranous disease. It is quite common, the causes productive of it being numerous. Such as abundant transpiration suddenly checked; large draughts of cold water while the body is overheated; the effects of this cause were strikingly illustrated in the army of Charles the V., in his expedition against Tunis, for the greater part of it as we are informed by De Haen, was afflicted with this disease in consequence of having quenched their thirst in the midst of great fatigue and perspiration. The suppression of any habitual, accidental or periodical discharge may produce it; Stoll has recorded a case of this kind, of hydrothorax, which was produced by the disappearance of a coryza; hydrocephalus has been caused by suppressed epistaxis, and I have seen it produced by the drying up of a seton, which had been in the neck for several months, and from which issued a very abundant discharge; Itard tells us that he has seen hydrothorax occasioned by the suppression of the menses; Sauvages speaks of a girl who whenever menstruation was over, was afflicted with anasarca; Goabeau records a case produced by sleeping on the ground under a thick shade, when the individual was much heated and fatigued. The repression of eruptive diseases, such as scarlatina, measles, &c. has given rise to it; instances of which we find in the works of Burserius, Odier, Lettsom, Rush, Itard, &c. Certain poisons and the bite of venomous reptiles have been accused as causes. Mead and Pulley, each record a case produced by a traumatic injury inflicted upon the abdomen, and dropsy from protracted and painful parturition proceeds from the same cause, the danger of which we learn from some observations recorded by Stoll and Selle. Inflammatory fever is sometimes succeeded by it,

an instance of which Itard saw in the military hospital of Val-de-Grace; rheumatism is productive of it, as is evinced by the statements of Lettsom, Rush, Richter, and a Neapolitan physician, quoted by Frank; Lieutaud records several cases of its having followed consumption and inflammatory catarrh; and we see from the cases contained in the writings of Stoll, Loss, and Frank, that it is produced by metastasis.

Acute Hydrocephalus.—Beginning with the brain, the organ most frequently the seat of idiopathic acute dropsy, we find violent cephalalgia, which is painfully exasperated by noise or light. Impatience of light is considered by Dr. Clarke as strikingly diagnostic at a very early stage of the disease, which occasions a violent contraction of the iris even in a moderate light, so as almost to obliterate the pupil. This circumstance, though overlooked by the moderns, is noticed by Aretius. The patient continually rolls his head from one side to the other; if he is unable to speak, he points out the seat of his suffering by perpetually elevating his hands to his head, and the muscles of his face are frequently thrown into convulsive action. The pain of the head sometimes alternates with pains in the neck, pectoral musles, and scapula. The countenance presents no characteristic expression; it is sometimes animated, serene, and full of hope; and at others dejected, drooping, and discouraging. The pulse is frequent, irregular, sometimes natural, and sometimes slower than in health, especially towards the termination of the disease. The tongue is generally clean, epigastrium painful, especially when the head is exempt from it, the bowels are remarkably torpid, great constipation, unless the child should still be at the breast, and the alvine evacuations are characteristically unnatural. The urine is diminished in quantity, and deposits a mucilaginous whitish sediment. Dr. Coindet has observed in hydrocephalic urine a micaceous deposition like the crystals of boracic acid, and which he regards as urea. This is in a great measure peculiar to hydrocephalus, and is observed in the second stage. The eyes of the patient claim particular attention. In the commencement they are very sensible, they often become ophthalmic, and when he sleeps or doses they roll under the eye-lids, which are seldom more than half closed. The eyes are sometimes convulsively thrown back into the orbit, and if we gently elevate the eye-lid the inferior part only of the opaque cornea is observable. As the disease progresses strabismus supervenes, and this convulsive oscillation of the pupil is manifested at the approach of light. This does not occur so frequently as is generally supposed, but when it

does it is peculiar to acute hydrocephalus, and when it is absent the eyes have a certain indescribable expression, which may be remarked in those intervals of calm and apparent exemption from pain in which the countenance is particularly tranquil. These symptoms form nothing more than an outline of the character of acute hydrocephalus, but they alone can be considered as peculiar to it; and as the multitude of symptoms that now and then accompany it, and with which the descriptions of authors have been unnecessarily crowded and confused, do not necessarily belong to it, we shall leave it to the practitioner to fill up the picture, or refer him to other sources to gratify his curiosity, under the full persuasion that we have pointed out those symptoms that alone could induce him to suppose the existence of the disease under consideration.

Acute Hydrothorax.—Idiopathic acute dropsy of the chest is not a common disease, though it is much more frequent than the same variety of ascites. I am led to this opinion by Stoll, who asserts that acute ascites occurs less frequently than any of the acute dropsies. Stoll has treated particularly of acute dropsies, and he declares that he has never met with a single instance of this species of ascites; Chauffard has, however, recently recorded several cases of it. When we reflect that chronic hydrothorax, the species to which physicians generally have directed their chief attention, has no well marked symptoms that may be always depended on, we cannot be surprised that acute hydrothorax is in the same predicament. Indeed, so like are symptoms of all the varieties of hydrothorax, that for practical purposes a single description might, with some little variation, answer; and as we shall treat somewhat in detail of the diagnosis, in which all the prominent features of this disease will be enumerated, a few brief remarks under each variety, in order to point out their distinctive characters as far as we are able, will accomplish our object. Thus acute hydrothorax differs from the chronic species in revealing itself more suddenly, progressing more rapidly, and offering more intensity in the symptoms. There is more thirst, more cutaneous heat, and more distressing cough; there is obscure and sometimes acute pulmonic pains, short, painful, and embarrassed respiration, with oppression sometimes so inconsiderable as to occasion but little inconvenience, which becomes all at once so distressing as to threaten immediate suffocation. The pulse is generally full and hard, sometimes vibrating. The pulse, however, must not always be our guide in the treatment of this disease, for when the circula-

tion of the blood through the lungs is much embarrassed, it is small and often irregular, and copious blood-letting will often impart to it strength and regularity.

Acute Ascites.—Idiopathic acute ascites gives very little premonitory intelligence of its approach, and though it declares itself more suddenly, it is not so rapid in its progress as acute hydrothorax. The patient is easily fatigued, there is moderate cutaneous excitement, the skin is dry, pulse sometimes full and possessing considerable strength, but more frequently it is small, frequent, quick, and much more regular than in hydrothorax, unless there should be some organic affection of the heart, in which case the pulse, if possible, is more irregular, diseases of the abdomen having as much, if not more, influence upon that organ than those in its immediate vicinity. Thirst considerable, tongue white, abdomen tense and sometimes very painful, but oftener there is obscure pains shooting occasionally in every direction of the cavity. I saw a case which presented this character; it occurred in a female about thirty-three years of age, six weeks subsequent to a painful and difficult labour. She appeared to recover without any troublesome accident, nor did any symptom manifest itself to induce the belief that improper violence had been offered during delivery. Between the time, however, of delivery and when she was attacked by ascites, she had laboured under measles. Whether she was improperly managed during the eruption or not I am unable to say, as I was not her physician; but she informed me that the disease was very mild.

Acute Anasarca.—Idiopathic acute cellular dropsy ranks next to acute hydrocephalus in point of frequency. This species of dropsy generally commences in the inferior extremities, from whence it gradually ascends to the body and other parts; sometimes, but very rarely, the face is first attacked, and then the other parts successively, the genitals not excepted. Many of the symptoms contained in the general description of acute drosy, particularly those referring to the swelling of the extremities, belong to this variety, and need not, therefore, be repeated here. This disease is frequently associated with hydrothorax, and when this is the case, the symptoms of the latter appear in unison with those that are peculiar to anasarca. Sometimes universal dropsy prevails, and then we have the symptoms of each variety developed.

Symptomatic acute dropsy—is much more common than the preceding, and is a symptom or an effect of visceral or membranous inflammation. Thus, inflammation of the brain or

membranes gives rise to hydrocephalus; of the lungs or pleura, to hydrothorax; and of the liver, spleen, bowels, peritoneum, &c., to ascites; and of the cellular membrane, to anasarca. The efficacy of inflammation in producing dropsy may be easily understood, when we reflect that its characteristic tendency to exhalation is, perhaps, greater than any other disease. So true is this, that Stoll has placed dropsy among the terminations of inflammation, and Sauvages speaks of a febrile dropsy preceded by acute fever, painful tumefaction of the abdomen, and terminating readily in death. We all know this was nothing more than symptomatic acute dropsy, produced by peritoneal inflammation. The only difference, therefore, between idiopathic and symptomatic acute dropsy, consists in the greater intensity of the causes producing the latter. Idiopathic being simply a lesion of the exhalants and absorbents without organic alteration; symptomatic a lesion of the same vessels, but with organic disease; in the former, there is morbid irritation giving rise to increased exhalation from the serous membranes; in the latter, there is inflammation producing thickening of the membranes, the exudation of a puriform lactescent matter, adhesions, adventitious membranes, &c. The urine in symptomatic dropsies differs from that of the idiopathic. Blackall says, that on the application of heat in a considerable number of dropsical cases, the urine coagulated like the diluted serum of the blood. This has been noticed by Cotunnius, Fordyce, Darwin, and Cruikshank. The latter remarks, that in the general dropsy, the urine coagulates like diluted serum of the blood; whilst in those which proceed from unsound viscera, it is usually high coloured and scanty, deposits, on cooling, a pink-coloured sediment, and does not coagulate either by heat or the nitrous acid. When the dropsy is symptomatic of hepatic derangement, the sediment is of a brick colour, and contains the boracic acid of Prout. This difference in the urine of idiopathic acute and symptomatic acute dropsies, obtains, likewise, in that of the idiopathic and symptomatic chronic varieties; it will, therefore, be unnecessary for us to return again to this subject.

An attempt to give a particular description of the different varieties of symptomatic acute dropsy would be entirely vain, and in a great measure unprofitable. For the chief difference between the idiopathic and symptomatic acute dropsy, besides those already pointed out, consists in those symptoms which arise from the visceral and membranous affections of which the dropsy is symptomatic, therefore, not properly within

the sphere of our inquiries, and should be studied in another place. These symptoms, moreover, are very numerous and were it necessary to detail them, they would extend this essay beyond reasonable limits, we shall, therefore, in a hurried manner advert for a moment to a few circumstances intimately associated with the dropsy itself. Thus in symptomatic acute hydrocephalus the convulsive motions, redness of the conjunctiva, cephalalgia, stupor, spontaneous vomiting, and dilatation of the pupil, are more completely developed, and more closely grouped together than in the idiopathic. Symptomatic acute hydrothorax is very common in consequence of the many acute affections to which the lungs and pleura are exposed, as is evinced by the multiplied observations of Morgagni and Stoll. The symptoms of this variety of dropsy though the causes are more intense than those of the idiopathic, proceed so moderately and frequently so insidiously for some time, as not even to prevent the patient from attending to his daily avocations. Soon, however, all the symptoms develop themselves with exceeding violence, the effusion with astonishing rapidity augments and cuts off the patient when neither himself nor his friends are prepared to expect so sudden and fatal a termination. In symptomatic acute ascites and anasarca the difference is so inconsiderable and inappreciable between it and the idiopathic variety, at least on the score of practical worth, that we deem it unnecessary to add any thing more than what we have said on the subject of acute dropsies.

When we examine the annals of the profession, we find that nearly all the facts accumulated, theoretical explanations given, and therapeutic means eulogized as efficacious, have reference almost exclusively to chronic dropsy. This, however, may with propriety be attributed to its comparative frequency.

A general description of chronic dropsy would perhaps embrace the following characteristic features. Dry, discoloured and flaccid skin; pallid, tallowy, and tumid face; conjunctiva bluish and destitute of blood-vessels; considerable thirst; inspissated, reddish and muddy urine, but not so thick, according to Hoffman, in anasarca as in the other varieties, and unchanged in its quality and quantity in hydrocephalus. Mind dejected and perpetually preyed upon by the apprehension of death; palpitation frequently independent of organic lesion of the heart; debility and great mental despondency particularly after sleep, which is constantly disturbed by distressing and exhausting dreams; intume-

scence of the extremities, especially of the side affected with the dropsical effusion or the organic lesion by which the morbid exhalation has been caused. Thus we pretty generally see the inferior extremities and scrotum swelled in ascites; the hands and sometimes the thoracic parieties in hydrothorax; the eye-lids and upper lip in hydrocephalus, &c. We are informed by Aretæus that hydropics soon become disgusted with every kind of aliment, the appetite being remarkably whimsical; they are afflicted with gastric flatulency; inactive and opposed to exercise; effeminate in the extreme, and sometimes very childish; pleased with trifles and devoted to life. An increase of capacity is an universal attribute of all dropsies, and the prolific source of a multitude of symptoms. Augmentation of capacity may proceed from distention of the containing parieties, or compression of the surrounding viscera by the serous accumulation. When from the former the intumescence soon becomes sensible, in the latter not until the amount of effused serum becomes so great as to overcome the resistance of the parieties by which it is confined. This may be the case when the walls of the dropsical cavity are composed of bone and cartilage, as the thorax, or simply osseous as the cranium. When the tumour is extensive in surface as in cellular dropsy, the skin is shining, polished, and waxy, destitute of elasticity, and readily retains the impression of the finger.

Idiopathic chronic hydrocephalus is independent of cerebral lesion, and belongs to that class of dropsies, supposed by us to arise from a degree of excitement of the exhalants very little superior to that of health. The epithet chronic has been for a great while restricted to this disease, when it appears in children, at or a short time after birth, but we feel convinced that the term has been improperly confined as it may be with great correctness extended to every period of life, no age being exempt from it. Thus we are informed by Frank, that he saw a young man nineteen years of age, whose head was so enormously large as to become a matter of curiosity, and was consequently deposited in the museum of Pavia; he quotes the case of a man thirty-five years of age, in the right ventricle of whose brain a bladder of the size of a small apple, full of water was found; Michealis speaks of an individual nine and twenty years of age, in whom the disease had existed from birth; Van Swieten speaks of a man thirty years old, who had laboured under hydrocephalus from his infancy, his head was so large and heavy that he was unable to support it erect; his body did not exceed

that of a child ten years of age, and he enjoyed his mental faculties unimpared, but his expression of countenance was stupid and unmeaning; Frank records the case of a woman who lived in the vicinity of Upsal, who at the age of six presented all the symptoms of hydrocephalus with which she survived forty-five years; and Heberden gives us the history of a man upwards of eighty years of age, in the ventricles of whose brain eight ounces of water were found.

Though idiopathic chronic hydrocephalus may, and is, no doubt of the same nature essentially, at whatever period of life it may appear, that which attacks individuals removed by several years from the age of infancy is more perfectly developed, and manifests phenomena not observed in the latter; we conceive therefore, that we shall facilitate considerably the study of this disease by considering its varieties separately.

Hydrocephalus of new-born children is not according to Morgagni very common, but it occurs more frequently in girls than boys. He also observes that it sometimes attacks the fœtus in utero, and if it should not declare itself until after the first three weeks or even the first three months after birth, it is not so much a recent affection as the evolution of a pre-existing disease. When the fœtus labours under hydrocephalus, the effusion becomes sometimes so considerable as to retard the labour, and greatly harass the delivery. Blanchard informs of an instance in which four pounds of water was evacuated from the head immediately after birth, and Capuron remarks that in the month of July, 1818, in conjunction with professor Magjolin, he was obliged to open the head of a child and draw off three pounds of liquid, before the labour could be completed.

The pathognomonic sign of this disease, is an expansion of the cranial parietes, and this expansion sometimes attains an extent perfectly incredible, but for the high authority from which it emanates. Thus professor Stringham tells us that an infant was attacked by hydrocephalus in its third month, and continued two years, during which time the head measured two feet six inches and a half; Donald Monro has seen it reach by the eighth year, two feet four inches, one foot more than it should have done, and Bartholin speaks very familiarly of its measuring two, three and even four feet in circumference. The head generally enlarges by the gradual separation of the bones, but in a few instances the first symptom has been a small, elastic tumour on the upper part of the head, occasioned by an irregularity in the dura-mater and its yielding more readily at the presenting part, than at any other

quarter. This tumour sometimes acquires a most enormous magnitude: but its parietes very rarely burst, for being pressed uniformly in every direction, they become thick and compact. Thus, Ruysch asserts that he saw one of these tumours that exceeded in size that of the fœtus, the contents of which communicated with that in the ventricles; Wepfer records the case of a considerable swelling of the same kind, situated upon the occiput; the child lived six years, though she had during that time catarrhal fever, and dysentery, and died of convulsions and palsy of the left foot. This tumour communicated with the interior of the head, by a round opening in the occipital bone. The ventricles contained more than a pound of bloody serum. Whenever these tumours give way, all the bones go asunder, and the tumour is frequently when not too large, swallowed up in the swell. Sometimes the occipital or parietal bones alone are enlarged; Ruysch preserved a parietal bone that had grown to such an enormous size, that it would have served for a helmet, and would have covered the entire head of a man. It is seldom that all the bones of the head enlarge and become thickened, we are not however entirely destitute of such examples; Lassus has seen them so large and thick that he says he would have taken them for those of a giant; such was the character of the cranium of a hydrocephalic spoken of by Duvernay. When the enlargement takes place longitudinally, the coronal and lamdoidal sutures are separated to a great distance from each other, the upper row of teeth projects over the lower, the arch of the orbit does not correspond with the inferior part of the socket, and the eyes over hung by the projecting forehead, gives to the face a most frightful appearance. Such, according to Camper, was the character of the deformed girl exhibited to the curiosity of the public. When the cranial bones yield to the resistance offered by the serous effusion, the sutures and fontanels become progressively enlarged, and sometimes to such an extent as to enable us to feel the fluctuation of the fluid and to render the head transparent. Frank says he has seen children with enormous heads, the bones of which were so thin and transparent as to permit him to observe the sinuses.

It is matter of astonishment that frequently in hydrocephalus of enormous magnitude, the intellectual faculties should throughout the disease remain unimpaired, and sometimes even one or more of them acquire additional strength. Tulpius records a case in which the patient continued sensible until death, though the brain was reduced to a kind of membrane; he speaks also of a child who preserved his

mental faculties unimpaired, though the brain was completely disorganized; in the case of Donald Monro, the head acquired an enormous magnitude, and the memory uncommon retentiveness; and Smyth tells of a child whose head measured twenty-nine inches and a half, with a perfect retention of the intellectual faculties. Children labouring under this disease, sometimes preserve their accustomed gaiety, but not always; Littre speaks of a child who was afflicted with it two years, who slept but little, and who rarely ceased to weep during the whole time; they learn with facility and continue for several years exempt from convulsions. It is comparatively rare, however, that the disease pursues this temperate course, for the brain generally announces its compression by the most unequivocal signs. The senses, particularly seeing and hearing, are enfeebled and cannot sustain without pain, the action of light and sound; hebetude of the intellectual functions; languor of the vital powers; sometimes paralysis of the inferior extremities; inclination of the head to one side, which commonly rests upon the shoulder; continual somnolency, &c., are the phenomena which denote compression of the brain.

The second variety of idiopathic chronic hydrocephalus seldom occurring, is but little known. We find but few authors who have spoken of it, and it is really surprising, that the able, accurate and circumstantial description of it, published in the year 1718, by Petit, should not have heretofore more generally attracted the attention of physicians. In 1769 it was noticed rather cursorily by the celebrated Whytt in a posthumus publication. He says its commencement is insidious, its duration protracted, and its progress slow. Warren of London describes it in an essay published in a periodical journal, for the year 1788, and appears to be well acquainted with it. He characterizes it by two principal circumstances; inconsiderable or no cephalalgia; debilitated and languishing condition of the system. Itard has still more recently called the attention of the profession to it, and has faithfully described it, whose labours will contribute considerably to render our account of it intelligible and useful. The preceding, together with a few hints scattered through other publications, embraces all that we are in possession of on this subject.

This disease is not often observed in adults, but when they are attacked it is generally owing to some indolent cerebral affection, contusion, or concussion. It terminates a number of infantile diseases, that are in some measure peculiar to chil-

dren from birth, and affords reason to believe that some are congenitally predisposed to it. These indispositions may continue weeks, months, and even years, before hydrocephalus is revealed, and may with some propriety be considered its first, as it certainly is its forming stage. The second period of the disease is characterized by vomiting, stupor, convulsions, feebleness of vision or strabismus. When these symptoms are not very intense, there is but little reason to apprehend that death will take place soon, for then its chronic character is established, and the sufferer is doomed to drag out a painful existence, a prey to paralysis and convulsions, with a total wreck of the intellectual faculties. When the symptoms of compression appear to be durably fixed, sometimes the action of medicines or the efforts of nature produce a disappearance, or a metastasis of the disease. When it disappears it will return in a few weeks with redoubled intensity, but when transposed, the patient may enjoy a longer respite from his suffering, and sometimes a complete exemption during the remainder of his life. We are informed by Frank that the daughter of a prince of Vienna, was when six months old, attacked by all the symptoms of chronic hydrocephalus; when the first year had expired she did not recognise her nurse—had no desire for any thing, and eat only what was put into her mouth. When the disease became so violent as to extinguish all hope of her recovery, the dropsy of the brain was converted into ascites, the latter disease yielded readily to appropriate treatment, and she was soon restored to health. When she reached her seventh year, she was threatened by a second hydrocephalic attack, but was relieved by timely assistance. This variety of hydrocephalus has been fortunately converted into anasarca, and has been entirely removed by the appearance of scrophula, and Hufeland has seen it at Berlin, produced by the disappearance of scrophulous tumours.

The symptoms however, of this disease come on sometimes very suddenly, and proceed with all the intensity and malignity of acute hydrocephalus; such as vomiting, stupor, and convulsions, which soon terminate in death. Itard saw a child seven years of age, perish in six hours of the most violent convulsions alternating with a lethargic prostration, when it had in all probability, laboured under effusion in the ventricles during the eight preceding months. Thus we discover that this disease can, after it has manifested a truly chronic character, become towards its termination, as violent as acute hydrocephalus. In establishing our diagnosis, therefore, we

should not attend so much to the rapidity with which the effusion is formed, to the protracted nature of the disease, as to the accompanying asthenia, and to the absence of those symptoms of sub-acute inflammation, characterizing the acute species. Languor is the prominent feature of the chronic, as pain is of the acute species. In the commencement, says Petit, those who are attacked with this disease are despondent, pallid, feeble and languishing; the eye is pensive, the pupil dilated; they bite their lips, the mouth is slightly convulsed, they rub and pick the nose, and experience stupor; the bowels generally indolent, are sometimes soluble.

Symptomatic chronic hydrocephalus is a common disease, in consequence of the multitude of chronic affections besides those of the encephalon, that terminate in the brain. Thus polypi of the heart, aneurisms of the large blood-vessels, asthma, chronic catarrh, the desiccation of old ulcers, and even hooping-cough, produce it. Many examples of its having proceeded from encephalic organic lesions, may be found in the works of Bonet, Morgagni, and Lieutaud. These causes being so numerous, and imparting so many modifications to the symptoms, and innumerable shades of character to the disease itself, a description of it would be as impossible as nugatory. A knowledge of the diseases capable of producing this variety of hydrocephalus is necessary, in order to become familiarly acquainted with it; we shall, therefore, as such details would be foreign to our present undertaking, at once dismiss the history of hydrocephalus.

Idiopathic chronic hydrothorax is so very uncommon, that Itard says he does not believe there is a single well attested case on record. No perfect instance of this kind is to be found in the works of Morgagni, Lieutaud, Portal, or Baillie. Diseases of the chest are so frequently associated together, that it is almost impossible to find an insulated or uncombined affection of any considerable extent in that cavity; it is not, therefore, at all surprising that we should generally, if not always, find hydrothorax connected with some organic lesion. Why a morbid state of the exhalants and absorbents of the chest may not take place independent of any other affection, and produce dropsy, is to me entirely inexplicable; but I would ask, might not those lesions associated with hydropic effusion in the chest, be produced by the serous collection, instead of the latter being invariably independent of the former? Their coincidence has, by no means, convinced me that chronic hydrothorax is necessarily a symptomatic disease in every instance, though it may be generally. The diagnosis of af-

fections of the chest is so very imperfect, that we are unable, from the confused assemblage of symptoms manifested, to say what progress a simple dropsy, or an organic lesion is making; therefore, we cannot affirm definitively, that chronic hydrothorax is ever idiopathic; but there is a circumstance connected with dropsical affections of the chest, which offers no inconsiderable inducement to doubt the conclusions of pathological anatomists. It is known to every physician at all conversant with chronic hydrothorax, that there is a marked difference in the intensity of the symptoms in different individuals. In some instances, the disease proceeds so slow and insidious, that the patient experiences but little inconvenience; in others, the symptoms are so oppressive that they are their antipodes in every respect, but in both cases organic lesions will be found after death. Does not this remarkable difference arise from some essential difference in the causes producing them? May not these lesions, generally primitive, be also sometimes consecutive?

Besides the general causes productive of chronic ascites, others have been mentioned by authors, which could not be arranged with propriety under either of the heads of our general view. Thus Lister attributes the great number of cases of this disease, that prevailed in London at a certain time, to the excessive use of ardent spirits; Stahl, however, in reference to this assigned cause, has very properly remarked, that the people of the north of Europe, as Russia, Poland, Sweden, &c., are not less addicted to intemperance than the inhabitants of London, yet the number of abdominal dropsies in those countries, do not appear to be greater than in any other parts of Europe. Lister also accuses Peruvian bark of producing many of the dropsies that occur in England; but the arguments in favour of this opinion, adduced by himself or Stahl, are far from being conclusive. Before we can believe that cinchona has so dangerous a tendency, we must be convinced that intermittent fever was not more prevalent then than previously, and that no circumstance developed and rendered more common than usual, those diseases that are in the habit of producing dropsy.

Chronic ascites is idiopathic and symptomatic, but the difference between them can be but seldom, in clinical practice, detected. We may, however, form a pretty good estimate of its character, when it suddenly occurs in health, when it succeeds large draughts of cold water, or excessive and protracted menstruation, which are some of the causes of the idiopathic variety; or when it more leisurely follows conges-

tion or inflammation of the abdominal viscera, or an organic lesion of the heart, which are causes of the symptomatic variety. But besides this small number of causes, there are a great many others whose real character it is impossible to detect.

Chronic ascites is generally preceded by many of the prenomena which denote digestive, cutaneous, pulmonary, and urinary derangement. Soon after the appearance of these symptoms a swelling is observed in the hypogastrium, which gradually extends until the whole abdomen is involved in the intumescence. Distention and sense of weight is most considerable in the side on which the patient reposes; fluctuation may be generally discovered by applying the left hand on one side of the abdomen, and striking with the right on the other. As the effusion augments, the dyspnœa progressively increases; the countenance exhibits a pale, bloated appearance, thirst is great, skin dry, and the urine much diminished, is inspissated, high-coloured, and deposits a lateritious sediment; when the disease is symptomatic, it is usually scanty, high-coloured, and on cooling, deposits a pink coloured sediment.

Chronic anasarca is a general tumefaction of the body and extremities, produced by the infiltration of serum into the cells of the sub-cutaneous cellular tissue. Anasarca differs from œdema in being more general, the latter confining itself to one part only, and attacking separately the eyelids, face, feet, and hands. Anasarca is idiopathic and symptomatic; but their likeness to each other is so striking, that one description will answer for both. This resemblance is not however perfect, for the diseased organ of which the dropsy is symptomatic, will give rise to phenomena, not to be observed in the idiopathic. The chief difference between them proceeds from the causes, prognosis, and treatment. Thus the idiopathic is most frequently observed in those of strongly marked lymphatic temperament; those who lead a sedentary life in the midst of a humid atmosphere; those who inhabit foggy and deep valleys, or moorish districts; those who are incarcerated in prison, or confined in a subterraneous dungeon, destitute of light and heat; and those who from imperious necessity, are compelled to sleep on the damp ground, or exposed to rain. This variety of anasarca is very common among soldiers, who after a long and fatiguing march, or excessive exertion, in throwing up circumvallations, are compelled with their clothes saturated with sweat, and without fire to dry them, to bivouac all night, as did the army of Buonaparte, the night before the famous battle of Austerlitz.

The symptomatic variety occurs very frequently during convalescence, from excessive evacuations, chronic diseases, protracted intermittents, scarlet eruption; from the suppression of certain discharges, as hemorrhoids, menses, lochia or retrocession of any eruptive disease; from critical diarrhœa; from organic affections of the viscera, such as the heart, lungs, liver, spleen, &c.

This disease generally opens with œdema of the feet and ankles, only occurs in the evening, and yields to a recumbent posture. By degrees it becomes more permanent, and ascends higher, till not only the thighs, hips, and genitals, but the body at large is affected. The intumescence retains for some time the impression of the finger; the skin over its whole surface is soft, pale, and often of a reduced temperature. Sometimes the distending fluid transudes under the epidermis, detaches this membrane and forms vesicles under it; the face and eye-lids are surcharged and bloated; the lips are whitish, and the complexion sallow and waxy. The magnitude of the inferior extremities and body augments, and the infiltration extends sometimes to the ends of the fingers. The patient complains of lassitude and debility; his sleep is short, and disturbed by oppression; the circulation languishes; the pulse is feeble, slow, and small; respiration is very much embarrassed, and is often accompanied by anxiety and suffocating cough, which is succeeded by the expectoration of a watery fluid; the digestive organs are deranged; the gums are pale and swollen; the tongue is white, pliant, and moist; the appetite is much impaired, and thirst great; the urine is aqueous, clear, and small in quantity.

Diagnosis.—We shall now proceed to the consideration of the diagnosis of the different species of dropsy. There are many diseases which may be confounded with idiopathic acute hydrocephalus, and among these phrenitis stands perhaps the most conspicuous. The chief difference between these two cerebral affections, consists in the greater intensity of the latter, and as no practical inconvenience can arise from confounding them, we shall not stop to point out their slight, and frequently imperceptible shades of difference. Ataxic fevers bear considerable resemblance to this species of dropsy, but they may be distinguished from the latter, by cephalalgia being more obtuse; exemption from those frequent exacerbations, which in hydrocephalus produce the most violent crises, the pulse is more invariably febrile, the sensibility of the retina is not so great; exemption from those convulsive oscillations of the pupil, which were first noticed by Odier as

one of the characteristics of acute hydrocephalus. When however, the symptoms of the latter disease are not very fully developed, the distinction will not be very easily drawn. Serous apoplexy is not unlike in many respects, dropsy of the ventricles; the latter however, may be generally distinguished from the former, by the rapidity with which the effusion in serous apoplexy takes place; by apyrexia, by the sudden extinction of animal sensibility, by stertorous respiration, and by adult age. Verminous diseases never present the intense cephalalgia of acute hydrocephalus, permanent stupor, nor the progressively increasing intensity of the symptoms. Dentition being frequently accompanied by the remittent type of fever, sometimes by convulsions, spontaneous vomiting, and frequent alternations of paleness and animation of countenance, may be mistaken for hydrocephalus; but in the former, the fever and stupor are not so manifest, the brain is not so much affected, nor are the symptoms generally so intense. As chronic hydrocephalus is less intense and malignant than the acute; as it cannot be easily confounded with any of those diseases that so closely simulate the latter; we do not deem it practically important to enter into details on the subject of its diagnosis.

The characteristic signs of hydrothorax are always equivocal and unfaithful, but we cannot go so far as to say, with Reimman and Morgagni, that it has no pathognomonic symptoms, nor with Frank, that it is rather at opening the patient after death, than at his bed-side, that we become acquainted with the seat of the effusion. It is true that the viscera of the chest are so closely connected together by contact and sympathy, that we are unable to decide definitively upon the diseased organ, or to tell from what particular viscus certain symptoms proceed, and this confusion is still further augmented, by the parietes of the chest preventing the serous collection from enlarging its capacity to any considerable extent. Thus the effusion may so depress the diaphragm as to induce us to believe, from the seat of the fluctuation, that the disease is located in the abdomen; but in the diagnosis of hydrothorax we are not to depend upon fluctuation nor any other individual symptom exclusively, but upon the whole collectively, and we shall rarely be deceived. I know that Februsi and De Haen have affirmed, that hydrothorax is not revealed sometimes by any symptom whatever, until all hope of recovery is extinguished; I know that Lentin, Stoerck, Rufus, and Scott, have recorded examples of its having existed entirely destitute of symptoms; but facts of this kind

have no tendency to invalidate the confidence to be reposed in them when they do occur; this singular circumstance, moreover, is not peculiar to dropsy of the chest, but obtains sometimes of almost every organic lesion to which the human body is subject. When we reflect that hydrothorax is a termination of so many diseases, it is not at all wonderful that its symptoms should be variable; for those affections alone have an uniformity in their symptoms, that proceed uniformly from the same causes, and exist always under the same circumstances.

The most certain sign of effusion in the thorax, is œdema of the chest; this is the opinion of Valentin and Lanay; Le Dran and Simson regard it as infallible and invariable; but Cullen, whose practice was by no means very limited, never met with it in a single instance: Hoffman was of opinion that it denoted considerable purulent collection in the thorax. Bulging of the sides is, perhaps, as characteristic, but not so common; it occurs, however, pretty frequently towards the termination of the disease. This symptom has been repeatedly observed by Itard, and he says that when it is accompanied by infiltration of the integuments, it is still more conclusive. Starting during sleep or on waking, is a common symptom of hydrothorax, but it does not invariably occur, as we are assured by Reimman, Helvich, Morgagni, and Frank; and when it is manifested, we are not to consider it as always proceeding from water in the chest, for it frequently arises from organic affections of the heart, from a scirrhus state of the lungs, and even from spasmodic affections of the respiratory organs. It has arisen, according to Itard, from suppression of the menses and hemorrhoids, accompanied by oppression or swelling of the inferior extremities. When starting during sleep arises either from effusion or organic disease of the heart, it is associated with a red, or livid colour of the face and lips, and tumefaction; the eyes are shining, weeping, and injected, all of which symptoms are more characteristic of organic affections of the heart or large blood vessels, than of hydrothorax; they, however, according to Corvisart, exist sometimes simultaneously. Helvich and Vicar affirm, that if starting can be reckoned pathognomonic, it is only when it has preceded, and not followed, œdematous swellings of the feet. Although dyspnœa, according to Bonet, Riviere, and Wepfer, is not invariable, and, although it is a symptom of many other thoracic affections, we are justified in considering it general in hydrothorax. This symptom, in some cases, is so very harassing,

that individuals have been obliged to pass successive days and nights on a chair, with the body inclined forwards, to prevent suffocation. Frequently, however, the patient falls a victim to the disease before dyspnœa becomes so violent, and this does not occur until effusion has existed some time, for according to Zimmerman, the respiration is but little affected in the commencement. The impossibility of reposing upon either side with equal ease, has been regarded as denoting effusion; this is generally true; but, as Morgagni has remarked, lying exclusively upon one side is not always an indication that the opposite is the seat of the accumulation. When both cavities contain hydropic serum, some persons prefer lying on the back. The weight felt in the course of the diaphragmatic attachments, is one of the most frequent and manifest symptoms of hydrothorax, and sometimes accompanies, as we are informed by Morgagni and Groetzius, dropsy of the pericardium. Much importance has been attached by Hippocrates to fluctuation, as a means of detecting the existence of hydrothorax. But it has been contended that fluctuation cannot be discovered, in consequence of the thoracic cavity not containing air; the motion of the fluid, therefore, is supposed incapable of producing any noise. The case we have already quoted from Frank, of a woman who could, at pleasure, produce a noise so perfectly resembling that of fluctuation as to deceive the most tutored ear, proves clearly how easily we may be deceived as to the cause and origin of sound. But the patient is not as easily deceived as the physician; when he turns upon one side, he feels the undulation of the fluid; and when he reposes horizontally, he can discover the water flowing towards the summit of the chest. In some organic diseases of the heart, the blood passes with difficulty through the contractions of that organ, and produces a hissing noise that may be heard at some distance from the patient, without the existence of air in the blood. We are not, therefore, to consider the ear as always deceived in such circumstances; on the contrary, the patient may very generally feel the fluctuation; Hippocrates says he has heard it, and I believe I have myself. When the cavity of the chest is too full; when the lungs have formed adhesions with the pleura; when the effusion is inspissated or confined in a cyst or in hydatids, it is impossible to detect any such evidence of hydrothorax. Hoffman and Baglivi were of opinion, that intumescence and torpitude of the left hand and arm, indicated the existence of effusion in the chest; but the experience of physicians is hostile to this coincidence.

The percussive method of Avenbrugger furnishes us with less equivocal evidence than can be derived from any other source. It consists in striking the chest with the palm of the hand, or with the ends of the fingers formed into a cone. This should be exercised upon different parts of the chest, and while the patient is sitting, lying upon his sides, belly, and back. If the part selected for percussion, sound like a cavity filled with air, the patient should change his position, and the percussion be continued upon the same place, and if it then emits a sound like that of solid flesh, we may rest assured the cavity contains effusion. Thus, by changing the position of the patient, and exercising percussion upon different parts of the chest, we may form a pretty correct estimate of the height to which the fluid has ascended in the thorax, and even its quantity. By the method recommended by Bichat, which consists in pressing upon the abdomen, and thus considerably aggravate the sense of suffocation for the moment, as well as the other symptoms that attend on hydrothorax, we may be able in many cases clearly to ascertain if there is effusion in the chest.

The difficulty in the diagnosis of ascites, is almost exclusively confined to women, though there are instances on record, of experienced physicians having committed most egregious errors when their patients were of the opposite sex. When the menses have not appeared for several months, there is reason to suspect pregnancy; but there are so many and discrepant motives actuating women, that we are not justified in founding our diagnosis upon this circumstance alone. Those who conceive in illicit intercourse, contend that they are dropsical; those who are married, believe, especially in advanced life when there is no probability of it, that they are pregnant; and others, who are really pregnant, believe that they have dropsy, and thus deceive themselves and very frequently the physician. Our mistakes, says Frank, are sometimes so ludicrous as to excite laughter, and sometimes so melancholy as to produce tears. A long experience, he observes, has taught me that dropsy, and especially ascites, is often one of the signs of pregnancy, or that hydropic women have at least a greater disposition to conceive at the commencement of the disease, than in a state of health. We have seen many pregnant females become dropsical without any assignable cause, and who could not be cured till after delivery; and we have seen many conceive more readily in a manifestly dropsical state, than at any other time. Frank records a case of very singular character, that com-

pletely illustrates how cautious we should be in giving our opinion of the nature of the disease. His patient declared that she was pregnant; Frank denied it, for which she discharged him, observing at the same time, "I am the mother of eight children, and can you suppose that the motions of the fœtus in utero can be unknown to me?" By applying the hand to the abdomen, motions could be felt, and appeared to be owing to the motions of the knee or elbow; but Frank having explored the uterus, and finding it empty, he persisted in his opinion. An able and experienced physician was called in, who suffered himself to be deceived by her statements, and the motions he felt in the abdomen. Three weeks afterwards, however, she died and was opened. The abdomen contained a large quantity of water, the uterus was hard and reduced in size, and hard angular tumours were found attached to the peritoneum by long, membranous pedicles. These tumours, unconfined, and floating in the cavity, had simulated the movements of a fœtus. Frank adopted the only means that could have revealed the mysterious nature of the disease, and have shielded him from deception. When the menses continue regular, the mammæ flattened or shrivelled, with a contracted and light coloured areola; and when the intumescence fluctuates to a tap of the finger, we may generally, and without much fear of being deceived, conclude the case to be dropsy: but if, on the contrary, the mammæ appear plump and globular, with a broad and deep coloured areola; if the menses have been suppressed; and if the swelling appear uniformly hard and solid, and more especially if it be seated about the symphysis of the pubes, or, provided it be higher; if it be round and circumscribed, though we may occasionally err, there can be little or no doubt, in most instances, of the existence of pregnancy. The bladder, when distended with urine, may be mistaken for ascites. In a protracted retention of urine, the bladder may ascend to the umbilicus and even diaphragm. Fluctuation is then as obvious as in ascites, and the inexperienced physician may readily commit a very serious mistake. We are informed by Frank, that a Russian general was, for a great while, treated for ascites, before his surgeon discovered that the tumefaction proceeded from the accumulation of urine in the bladder. This reservoir has been opened by the trocar, when the surgeon supposed he was tapping for ascites. A large mass of pus situated in the liver, the parenchyma of which has been destroyed by suppuration, may be mistaken for abdominal dropsy. These singular and important facts,

while they assist us in framing our diagnosis, teach us how familiarly we should be acquainted with the nature of the abdominal tumefaction, before we think of using the trocar.

When idiopathic acute hydrocephalus first arrested the attention of physicians, they were led from its malignity to consider it as essentially mortal. Thus when we refer to the writings of Whytt, Fothergill, and Watson, we are told, that it is positively incurable. The more recent publications of Willan, Percival, Odier, Cheyne, Smyth, Clark, Rush, and Itard contain accounts much more favourable. Though the prognosis in very many instances must still be considered unfavourable, we should not suffer ourselves to be discouraged, or induced to abandon, as I have often seen, with agony, the patient to the efforts of nature. As the disease increases in violence we should redouble our exertions and diligence, and we shall sometimes see when hope of recovery would appear wild and frantic, the ferocious monster gradually but sensibly loosing his talons from the little sufferer, and eventually paralysed by vigorous perseverance, he will acknowledge our victory in the perfect recovery of our patients, when we might have by a weak compliance with his wishes, suffered him to consign our patients to the grave. The symptomatic variety of acute dropsy is much less fatal than the idiopathic, indeed it sometimes yields to the efforts of nature alone.

Congenital hydrocephalus is necessarily fatal. When the infant does not perish at birth, or a short time afterwards, death will be the eventual consequence. There is no remedy for it, time produces no amelioration, and whether the subject of it lives months or years, he drags out a painful existence without one alleviating circumstance to engender hope, or dissipate the horrors of the grave. The idiopathic chronic hydrocephalus is less fatal than the acute. It presents such protracted remissions that we have ample opportunity to put into full operation every agent calculated to remove the disease. I am certain says the judicious Itard, as much so at least as we can be in such matters, that I have several times arrested the progress of this terrible disease in children who were debilitated, and the fever manifested in irregular paroxysms; when the bowels were moderately loose, and the abdomen painful; when there was continual disposition to sleep, the eyes half closed only while dozing, that particular character of the urine previously noticed, and that characteristic paleness and extraordinary variability of countenance which is the most striking feature of this disease.

The prognosis of hydrothorax must be generally unfavourable, since it is not often cured, and in many cases will hardly admit of palliation, the dyspnœa continuing to increase until the action of the lungs is entirely suspended by the quantity of water contained in the chest. When, however, hydrothorax is suddenly revealed; when dyspnœa is not excessive; when it proceeds from a curable disease, as acute anasarca, hepatic congestion or an exanthematous affection, there is a probability of our being able to remove it. Whenever it is compounded with any important or dangerous affection of the thorax, it is inevitably and necessarily fatal. Frequently the mortal event does not take place until general dropsy is declared, but sometimes death happens suddenly from suffocation, when the general amendment of the symptoms had revived hopes of a better issue. Approaching death may be forseen by the spitting of blood, by the sudden disappearance of the tumefaction of the extremities, by the subsidence of the abdominal parieties with augmentation of dyspnœa, or by the occurrence of slight intellectual wandering. Death suddenly follows the representation of acute inflammation of the lungs or pleura, a circumstance not uncommon during the existence of hydrothorax. Whenever dropsy of the chest immediately succeeds any other dropsy, death according to Stoll and Corvisart, is not slow in making his approach.

(To be continued.)

Art. II.—*Remarks on the Motion of the Blood in the Venous System.* By E. Bishop, M. D. of Maryland.

"Si quid novisti rectius istis,
Candidus imperti; si non, his utere mecum."

The causes which produce the motion of the blood in the venous system, are involved in considerable obscurity; and have been variously explained by different physiologists.

By some, they have been supposed to exist in the heart or arteries; by others in the capillaries, and by others still, in the pressure of the atmosphere on the surface of the body, connected with the tendency to a vacuum in the heart or thorax.

Objections have, however, been made to all these theories. With regard to the first it was said, that it implied too great a degree of power in the heart; and a want of co-operation between the heart and capillaries, which we never find in parts of the body concerned in the performance of the same functions.

To the second it was objected, that we have no proof that the capillaries are capable of performing such a function, and that the supposition is therefore, gratuitous and not to be supported.

The third set of physiologists are charged with the error of attempting to apply the laws of mechanics, pneumatics and hydraulics, to the various processes of the living body, without making sufficient allowance for the effects of the living principle.

The structure of the venous system may in part account for the obscurity, which hangs over the moving causes of the circulation of its blood.

The veins are membranous tubes, whose office is, to take up the blood from all parts of the body, and convey it to the right cavities of the heart. Their coats are very strong, but thin and extensible, and possess no tonicity or muscular power like the arteries, with the exception of that part of the two cavæ which is contiguous to the right auricle. The veins themselves, therefore, can produce no effect upon the motion of the blood which they contain.

By the effects of warmth and moisture, the cutaneous veins are at times, much more distended with blood, than they are at others; but this produces no effect upon the general circulating system. The veins being merely passive tubes for the conveyance of the blood from the capillaries to the

heart; if one set of them convey a greater quantity of blood, the others must convey less in the same proportion, and the uniformity of the supply at the heart is not thereby affected.

The veins arise by innumerable capillaries from all parts of the body; these pour their blood into the larger branches, which finally convey it to the two cavæ, and these terminate in the right auricle.

A circumstance which particularly deserves attention, is, that the volume of the venous system is continually diminishing, as it approaches the heart. It is found that the area of the transverse sections of all the branches of any vein taken at a given distance, is greater than that of the vein itself: of course as the venæ cavæ are subdivided, an infinite number of times to form all the capillaries; it follows that the area of the transverse sections of all the former, must be infinitely greater than those of the latter. But the same quantity of blood must flow through every section of the venous system towards the heart in the same time; and its velocity must be inversely as the capacity of the tube through which it flows: its velocity must therefore be infinitely greater in the venæ cavæ, than it is in the capillaries.

The theory of the venous circulation which has lately attracted the greatest share of public attention, is that of Dr. Barry, an English physician, resident at Paris. It seems that this gentleman, "while studying the phenomena of the venous circulation, was led to observe, that by the act of inspiration a void was made in the cavity of the thorax, and that all fluids, in communication with the interior of the chest, must be drawn towards it, as forced by the atmospheric pressure." He then goes on to remark, that "it must be confessed, all known facts are solved by this physical effect. Of this kind are the swelling of the jugulars during expiration, and their collapsion during the opposite movement, the cessation of certain hemorrhagies by forced inspiration, the absorption of air by the veins, the accidents that have occurred from opening any of the large venous trunks near the heart, &c. &c."

In the conclusion of his essay, Dr. Barry attempts to apply his theory to practice. He observes, that "any thing, which will remove the atmospheric pressure from poisoned wounds, will prevent the poison from being absorbed, and thus prevent its contaminating the system, or will even suspend its influence after these effects have begun." He thence infers the use of *cupping glasses* in cases of poisoned wounds.

The theory of Dr. Barry, supposes that no blood can enter

the thorax, except during inspiration. Yet we can easily suspend the motions of the thorax, while the heart makes thirty or forty pulsations; and during all this time, the circulation continues with perfect regularity. In the fœtus in utero, the heart acts regularly for weeks and months without any motion of the thorax whatever. In the cold-blooded animals there is never any expansion and contraction of the chest, yet the circulation is not therefore the less active and regular.

Strictly speaking, it can hardly be said, that the large venous trunks enter the *cavity* of the thorax at all. The heart is situated between the layers of the mediastinum, and rests upon the tendinous portion of the diaphragm.

These parts prevent its suffering any change of pressure during the alternate contraction and dilatation of the chest. The large venous trunks after entering the thorax, in order to reach the heart, pass along between the layers of the mediastinum in such a manner, that they also are almost entirely secured from pressure.

Bell informs, that "the enlarged capacity of the thorax, in every direction during inspiration, the raising of the ribs and thrusting out of the sternum, is attended with the contraction and sinking of the arch of the diaphragm. But this motion, which expands the cells of the lungs and draws the air into them, would disorder the heart's motion, would cause a lodgement of the blood, and distention of the great veins and sinuses, were they also under the influence of the motion of respiration. But the diaphragm moves only on its lateral parts; or it is checked and interrupted at its middle part by the connexions of the mediastinum. If the veins near the heart were under the same influence that the lungs are, they would be subject to the same change of quantity of what they contain; the blood would be accumulated in inspiration and forced out in expiration, and the regular action of the heart interrupted or disturbed."

Let us for a moment attend to the effect which the pressure of the atmosphere will have upon the motion of the blood in the venous system. This pressure is uniform over every part of the body; it is, therefore, just as great upon the capillaries, in proportion to their size, as it is upon the venous trunks, and just as great upon the veins as it is upon the arteries. No one will suppose that the air gets admittance into the venous system, so as to come in immediate contact with the blood. Its effects, therefore, whatever they are, must be produced by its acting externally on the coats of the

veins, through the medium of the integuments. But the veins, so far as our argument is concerned, may be regarded as perfectly and uniformly compressible tubes. The weight of the atmosphere on the surface of the body, is computed at nearly fifteen pounds on the square inch, and no part of the venous system possesses any power of resisting this pressure. Let us suppose, then, that a perfect vacuum exists in the thorax, and that a particle of blood is placed at some distance from it in any part of the venous system. It is evident that the atmosphere will compress the vein equally on every side of this particle. But by the laws of motion, a body that is compressed equally on all sides, will remain at rest. The pressure of the atmosphere will not, therefore, cause the particle of blood to move, and the same will hold true of every particle, when the veins are distended with a column of blood. It is evident, therefore, that even if there existed a perfect vacuum in any part of the thorax, the pressure of the atmosphere could give the blood no tendency to move towards it, unless there were a cause which could, in some degree, remove this pressure of the atmosphere between every particle of blood, and the part in which the vacuum was situated. But to suppose the existence of such a cause, is evidently absurd.

The effects of the pressure of the atmosphere on the surface of the body, have been overrated by some physiologists, and deserve a more particular investigation. It has been supposed that this pressure was capable of supporting the cutaneous veins, and thus assisting the circulation of the blood; but this is the fact in only a very partial degree. If the veins depend for their power of transmitting the blood, upon the external pressure of the atmosphere, how does it happen, while this pressure is uniform over every part of the body, that the veins of some parts become varicose, and those of others do not? This fact sufficiently proves, that a healthy state of the coats of the veins is required for the circulation of the blood, independent of the atmospheric pressure.

Dr. Barry, in attempting to apply his theory to practice, in cases of poisoned wounds, evidently supposes, that absorption is caused by the atmospheric pressure, and that cupping glasses produce their effects by removing this pressure. The modus operandi of cupping-glasses has, however, no connexion with absorption, nor with the motion of the blood in the venous system. When the pressure of the atmosphere has been removed from any part of the body, by means of a cupping-glass, the weight, which still continues pressing on the

other parts, will drive them all, both solid and fluid, in that direction from which the pressure has been removed. The attachments of the solids, however, prevent their being forced entirely into the glass to supply the vacuum, while the fluids, being compressed on all sides by their containing parts, will be forced out wherever an opening can be found. In fact, the blood is forced into a cupping-glass, upon the same principle by which the water is forced from a sponge, when we squeeze it in our hand.

If absorption depended upon the pressure of the atmosphere, we should find that, on very high mountains, where the barometer descends to half its usual height, the body would become universally anasarcous; and again, when a person descends in a diving bell, till the weight of three or four atmospheres is upon him, all the parts of the body should be taken up and removed. [See note at the end.]

If a limb, whose vessels have been weakened by disease, be suffered to hang down, it soon becomes œdematous; and if it be again placed in a horizontal posture, the œdema quickly disappears, although the pressure of the atmosphere is in both cases the same.

Fluids have a constant tendency to flow in that direction where they suffer the least pressure; but the pressure of the atmosphere is no greater on a particle of fluid in the vena saphena, or in the cellular texture of an œdematous limb, than it is in the vena cava ascendens, or in the thoracic duct. The pressure of the atmosphere has, therefore, no tendency to promote absorption, nor to accelerate the venous circulation.

Many writers upon physiological subjects seem unable to divest their minds of the idea, that a vacuum possesses some attractive power, by which it is able to produce, in the vessels contiguous to it, an accumulation of blood.

Thus, Dr. Barry mentions the swelling of the jugulars during expiration, as a proof, that the blood was rushing on to supply the tendency to a vacuum in the chest during inspiration. Dr. Carson, of Liverpool, notices the great quantity of blood in the large venous trunks after death, as an evidence that there existed a tendency to a vacuum in the thorax, from the "resilience of the lungs." Dr. Armstrong mentions the swelling which takes place in the veins after a ligature is placed upon the arm, as a proof that the blood was rushing on to supply the tendency to a vacuum in the heart.

Nothing, however, can be more erroneous than these opi-

nions. For it has already been shown, that the uniform pressure of the atmosphere can never cause a motion of the blood in the venous system, and this uniform pressure is in no way affected by the existence of a vacuum in the thorax or any other cavity.

If we suppose a vein to open freely into the cavity of the thorax, and to be distended with blood, and then a perfect vacuum to be formed in the chest, a small portion of the contents of this vessel will be forced into the vacuum, and its walls will collapse; but if the walls of the vessel were already in a state of collapse, before the existence of the vacuum, they will still remain in that situation, unless the blood is driven into them by some power different from the atmospheric pressure. And even when the vessel is filled with blood before the existence of a vacuum, only a small portion of its contents can be forced into the chest.

If the coats of the vessel are attached to the sides of the foramen by which it opens into the chest, this attachment will support these coats, and enable them to resist the atmospheric pressure contiguous to the orifice, and thus favour the entrance of the blood. But this support can only extend to a distance not exceeding the diameter of the vessel; beyond this distance the weight of the atmosphere will have just as great an effect in producing a collapse of the vessel, as it will in accelerating the motion of the blood.

Dr. Armstrong has broached a theory, which rests on similar principles to that of Dr. Barry. He however does not suppose the vacuum to exist in the general cavity of the thorax, but in the heart itself. He also extends his principles further than Dr. Barry; as he supposes the tendency to a vacuum in the heart, to be not only sufficient to account for the motion of the blood in the veins, but also of the lymph and chyle, in the lymphatics and lacteals.

The heart undoubtedly possesses a power of active dilatation, a power which seems to be a property of all the hollow muscles. Bichat informs us that if two hearts be taken from living animals at the same time; and the fingers be introduced into the cavity of one heart, while we grasp the other in our hand, we shall find the effort at dilatation in the one, equal to that of contraction in the other. This active dilatation of the heart is necessary to the free and easy circulation of the blood. Were there no power to dilate its strong muscular cavities, except the influx of blood from the veins, its motions would be exceedingly perplexed and embarrassed.

The thin and extensible coats of the veins, would also have

to support a greater weight than they could bear. But if we suppose the auricles to dilate and draw in the blood, from the cavæ, and on the contraction of these, if the ventricles again dilate and receive the blood in their turn, we shall see that provision is made for carrying on the circulation with ease and rapidity; and with a power which nothing will readily interrupt. But the influence of this active dilatation of the heart, is limited to a short distance. Its office is merely to receive the blood when brought to the auricles by the veins. The same objections may be made to the theory of Dr. Armstrong as were made to that of Dr. Barry, and which it is not here necessary to repeat. But to suppose the tendency to a vacuum in the heart, to be capable of drawing up the blood from the saphena, is just as absurd as it would be to attempt drawing water from a deep well by means of a pump made of the hose of a fire engine.

Dr. Armstrong in support of his theory, refers to the subject of venæ-section. He supposes the blood in the veins to be drawn towards the heart with such a momentum, that it produces the swelling of the veins, which we always observe, when a ligature is placed upon the arm. This however is undoubtedly an erroneous supposition. We know that if a vein is properly opened, a flow of blood may be continued from it, till a greater quantity is discharged than was contained in the whole arm at the beginning of the experiment. This is a sufficient proof that the motion of the blood in the venous system is produced by some "vis a tero" existing in the heart, arteries, or capillaries. A circumstance which occurred in the operating theatre of Professor Dupuytren of Paris, has been referred to by Dr. Barry as a confirmation of his opinion. This circumstance is familiar to every one. It seems that the professor was called upon to dissect a tumour from the neck of a young lady. While performing the operation, he was surprised by the occurrence of a hissing noise, similar to what would probably have taken place, had his knife penetrated the trachea. The patient immediately cried out she was dying, and in a few moments expired. On dissection it was discovered that a quantity of air had found its way into the heart.

The detail of the appearances discovered in the body, is not sufficiently minute to enable us accurately to account for this circumstance. The probability is, that the vein by which the air entered, was in such a diseased state, that after being cut off, its orifice remained rigid and patulous. Of course, as the blood already contained in it, descended to the

heart, the air would immediately follow, and be drawn in by the expansive power of the auricle. This might readily happen, if its cut extremity remained open; because after it entered the cavity of the thorax, its coats would be protected from the lateral pressure of the atmosphere by the layers of the mediastinum,* and under these circumstances a vein would resemble a rigid metallic tube, through which the air might very readily find its way to the heart, and occasion the fatal catastrophe.

The memoir of Dr. Barry informs us, that he "does not content himself with quoting facts in support of his opinion, but endeavours to establish them by direct experiment." The result of these experiments is, however, to be received with the utmost caution. We have no right to question the candour of Dr. Barry, neither can we deny the facts; but yet, these facts may be susceptible of a very different explanation from what Dr. Barry has chosen to give them. Besides, the animal frame is so complex and the sources of error so numerous, that after a man has become convinced of the truth of a theory, it would be a rare thing indeed, for him to fail in proving it, at least to his own satisfaction, by a course of experiments. And when these experiments are of such a nature as to inflict great torture on the animal upon which they are made, the agony which it suffers is often an additional source of error. Modern physiologists imitate the methods of those ancient judges, who put delinquents to the torture to make them confess their guilt: and, like those delinquents, nature, when stretched upon the rack, often gives false information.

Dr. Barry's principal experiment consisted in introducing a glass tube furnished with a stop-cock into one of the large veins, immersing the other end in some coloured liquid, and then turning the stop-cock. We are told that on these occasions, "at each strong inspiration of the animal, the fluid was rapidly absorbed, and that during expiration it remained stationary or occasionally slightly receded." The memoir then goes on to inform us, that "this was the case whenever the experimenter introduced the tube; and that this was done very skilfully into one of the *cavities of the thorax* or even of the *pericardium*."

* Dr. Bishop has here furnished an argument against himself. If it is admitted that within the cavity of the thorax the veins are protected "from the lateral pressure of the atmosphere, by the layers of mediastinum," what is to prevent the blood from being forced by the pressure of the atmosphere on the superficial veins into those that are deep seated, whenever a vacuum is formed by the diastole of the heart or the expansion of he chest?

EDITORS.

One would suppose that it must be a difficult matter to introduce a glass tube into the cavity of the thorax, or of the pericardium, in such a manner as to prevent the entrance of air at the same time; and unless this were entirely prevented, the lung would instantly collapse, and there could not again be the least tendency to a vacuum on that side of the chest. We will, however, for the sake of argument, suppose that the tube was introduced in such a manner, that the entrance of air along with it was entirely precluded; and we will also suppose, that the fluid ascended along the tube, and rushed into the cavity of the thorax as rapidly as Dr. Barry himself could wish. We will then stop and inquire what he has gained by his experiment. Every one knows, that if an opening be made into the cavity of the thorax, the air will rush in, and so will any other fluid connected with the chest under similar circumstances. But are we to conclude, because a fluid is forced through a glass tube into the cavity of the thorax, that the same effect would follow, if, instead of the glass tube, we should employ a flexible, compressible, membranous one, like the trunks of one of the veins; and especially if this, instead of opening freely into the cavity of the chest, should creep along between the layers of the mediastinum or under the diaphragm, and terminate in the right auricle of the heart? Certainly not. Let Dr. Barry subsitute a piece of intestine, or a tube of soft leather for one of glass in his experiments, and he will soon find his error. He will find that the pressure of the atmosphere is just as great against the sides of the tube, as it is upon the surface of the fluid intended to be raised; and his tube having no power to keep itself distended, will instantly collapse and become impervious.

If the arguments contained in the foregoing observations, have been placed in a favourable point of view, I trust it will be obvious to every one, that the theories of Dr. Barry and Dr. Armstrong are liable to many objections. It is certain that a fluid contained in a flexible, compressible tube, cannot be driven either in one direction or another, by the uniform pressure of the atmosphere on the coats of this tube, let it terminate in a vacuum or not. We must therefore seek for some cause of the motion of the blood in the veins, different from what either Dr. Barry or Dr. Armstrong have supposed. It has already been observed in a foregoing paragraph, that this cause, or "vis a tergo," must reside in the heart, arteries, or capillaries. Harvey and the older physiologists supposed it to reside in the heart. They supposed that this organ acted with sufficient force to carry the blood through the

arteries, capillaries and veins, till it returned to the heart again; and not only so, but that it returned with sufficient force to dilate the auricles, and open a passage for its reception. Later physiologists have however thought that they discovered sufficient reasons for doubting the truth of this opinion. They observed various irregularities in the course of the circulation, which, are not attended with a corresponding disorder in the heart's motion; and cannot therefore be accounted for on the supposition, that this is the sole agent in the motion of the blood. Of this kind are topical congestions and inflammations, the circumstances of blushing, various irritations, &c. &c. They also noticed the phenomena attending palpitation of the heart, when that organ acts with a great increase of vigour, but does not produce a corresponding increase in the velocity of the circulation. Another circumstance which attracted their attention, was the emptiness of the arteries after death: and they asked, if the heart is the sole cause of the circulation of the blood, how does it happen that the arteries are entirely emptied of their contents, when this cause ceases to act? To this inquiry various answers were proposed. By some it was said that the arteries were emptied by the continued action of the heart, or by its continuing to expel after it ceased to receive blood. But this opinion is contradicted by the fact, that the heart itself is usually found to contain blood after death. Besides, were it true that it continues to expel after it has ceased to receive blood, this would merely be a reason why the heart should be found empty after death, but not why the arteries should be so likewise.

Dr. James Carson of Liverpool, has attempted to account for the emptiness of the arteries after death, in a different manner. In a paper published in the eleventh volume of the medico-chirurgical transactions, he has advanced the opinion that this circumstance is essentially to be attributed to what he calls "the resilience of the lungs:"—that is, to the force with which they contract after death, and tend to form a vacuum in the sac of the pleura. This tendency to a vacuum he supposes to be so great, that the atmospheric pressure drives all the blood in the body towards it, and thus leaves the arteries empty. In answer to this hypothesis, I would merely repeat what has been proved already, that the uniform pressure of the atmosphere, can never, by acting on the coats of flexible, compressible, membranous tubes, like the veins, produce a motion in either one direction or another in their contained fluids. If this is true, Dr. Carson's theory must fall to the ground, as it is evidently no less untenable than Dr. Barry's and Dr. Armstrong's.

Dr. Carson has also attempted to establish his opinions by a course of experiments. These experiments consisted in making a free opening into the chest of a living animal, thus permitting the entrance of the air, and preventing all tendency to a vacuum after death, in the cavity of the thorax. The animals experimented upon were rabbits, and the appearances discovered on dissection were as follows: "The vessels, particularly of the intestines, stomach, and mesentery, were very distinct and full of blood, forming frequent anastomoses with each other. The flesh was reddish, and when cut into, bled. The liver was like red morocco. A part of the descending aorta, above the bifurcation of the iliacs, after its extremities had been secured by ligatures, was cut out, and found to contain a small cylinder of blood."

Another rabbit was killed by thrusting a sharp instrument between the vertebræ of the neck. "It died instantly and was immediately opened. Scarcely was the vestige of a blood vessel to be observed on the surface of the intestines or stomach, which had a pale appearance externally, except where they were tinged by the colour of their contents. The membranes scarcely exhibited any traces of vascularity. The flesh was white, and when cut into, appeared dry, discharging at some parts a drop or two of blood. The liver was of a dusky brown colour. The trunks of the veins were swollen and rounded; whereas in the other rabbit, they appeared flat, and to contani only a thin layer of blood." It may not be easy to explain the appearances discovered in the first rabbit. They would, however, seem to indicate that the capillaries of the whole body were paralysed by the collapse of the lungs. It is evident that they have no bearing upon the point, which Dr. Carson wishes to establish. A vacuum in the thorax has no power over the blood in the veins. Yet in the first rabbit, where there was no tendency to a vacuum, "the veins were flat and contained only a thin layer of blood;" whereas in the other rabbit, in which, (according to Dr. Carson at least,) there was a tendency to a vacuum, and where of course the veins ought to have been empty, because their contents ought to have been forced into it by the atmospheric pressure, "they were full and rounded with blood."

Another plan to account for the vacuity of the arteries after death, is, to suppose that they are emptied by their own contractile power. But unless the advocates of this opinion can show, that the arteries contract to such a degree as totally to obliterate their cavity, they evidently cannot establish

their position; since they are so totally destitute of a particle of blood after death, as to have always been considered air vessels until the researches of Harvey. The arteries are possessed of a great degree of elasticity, together with a considerable share of tonicity or muscular power. Their elasticity enables them to dilate at the instant in which the blood is injected into them by the contraction of the ventricle; they then quickly contract upon it, and the semilunar valves preventing its return into the heart, it is carried forward by a steady and uniform current to the capillaries. These vessels then take it up and convey it to the veins.

It is the opinion of Bichat that the power of the heart ceases at the capillaries; and that the peculiar action of these vessels, is the sole cause of the motion of the blood in the veins. Magendie opposes this doctrine, and contends that the venous circulation is caused by the action of the heart. He has also endeavoured to establish his point by experiment; but his arguments appear rather unconclusive, and his experiments far from satisfactory. He seems to think that this capillary action does not exist, because it is not cognizable by our senses; yet how many processes are constantly going on in the body, which are not the less real, although the manner in which they are performed eludes our scrutiny? Bichat calls this action "an insensible vibration of the vascular parietes." This perhaps is going too far. No one can describe the manner in which the lacteals absorb the chyle, or the extremities of the biliary ducts separate the bile; although these processes do not for that reason the less certainly exist. If a large quantity of some coloured fluid be injected into one of the serous cavities, it is quickly taken up by the capillary veins; and can we not as easily believe that the venous extremities will take up the blood from the arterial extremities, by their own peculiar action, as that they will take up a fluid from the surface of a serous membrane? and why should we suppose them to be less active in the former process, than they are in the latter?

The capillaries undoubtedly perform an important part in the functions of the living system. It is by their action alone, that a motion in the fluids of various parts of the body is produced. The lymphatics and lacteals take up the lymph and chyle, and convey them into the venous system by the mere force of capillary action. The extremities of the salivary, biliary, and pancreatic ducts, are of themselves sufficient to transmit the products of their secretions to those places where their use is required. Fluids are carried to a

great height in vegetables, without any apparent moving cause, except the action of capillary tubes. Many insects are without a heart, or merely have an artery in place of one, and human fœtuses have been born entirely destitute of a heart, although their bodies could not have been formed without a motion of fluids in capillary tubes. It is in capillary tubes of an indefinite degree of minuteness, that the important change from venous blood to arterial, and again from arterial to venous blood, takes place; and by similar vessels are all the secretions of the body performed. The capillaries are the agents of absorption. They take up the useless particles from all parts of the body, and convey them into the veins. They are, in fact, the most important organs concerned in the circulation of the blood; the heart is merely an accelerator of the circulation, an instrument intended to give it liveliness and forcê. The capillaries are the first to commence a state of animation and the last to die. In the chick in ovo, the action of the capillary vessels is necessary to the formation of the punctum saliens itself. And after the cessation of the heart's action by death, the capillaries still continue their functions, mucus still continues to be secreted, the lacteals still continue to take up the chyle, and the hair and nails still continue to grow.

The experiments by which Majendie endeavours to prove that the heart alone is the cause of the venous circulation, consist in applying a ligature to the thigh of a dog, without including the femoral artery or vein. He then applies a ligature to the vein near the groin, and makes a slight opening in this vessel. When this is done the blood will instantly escape, forming a considerable jet. He now presses the artery between the fingers to prevent the arterial blood from reaching the member. "The jet will not stop on this account, it will continue some instants longer; but it will become less and less, and at last cease, although the vein remains full. If the artery be examined during the production of these phenomena, it will be seen to contract by degrees, and will become completely empty."

Now, the artery, in this case, either contracted to such a degree as totally to obliterate its cavity, or it did not. If its cavity was entirely obliterated, why does not Majendie inform us of it? and if it was not, what does the result of the experiment prove, except that the capillaries were fully adequate to the task of completely exhausting the artery of its blood? It appears, however, that in Dr. Carson's experiments, when the capillaries are paralysed by the collapse of the

lungs, the arteries still contained a cylinder of blood, thus proving that the arteries do not contract so as entirely to obliterate their cavity. Majendie's experiment is in fact the same as that of applying a ligature to the aorta, after which the arteries are constantly found empty.

Were the blood in the arteries in a state of perfect quiescence, we should see nothing uncommon in the circumstance of its being taken up by the veins, and carried to the right side of the heart. This is a process with which we are familiar. When a ligature is placed upon an artery for the cure of an aneurism, it is considered as nothing extraordinary for the tumour to decrease one third in twelve hours afterwards. Yet here the absorbing vessels act under great disadvantages, because the fluid to be absorbed exists in a large mass, and the absorbing mouths can only reach its surface, whereas in the circulating system the fluid to be absorbed, is divided among the innumerable ramifications of the terminal arteries. In the latter case, also, the quickness of the absorption is greatly increased, because a constant flow of blood towards the capillaries is produced by the arteries, and none of them can continue a moment idle for the want of materials to act upon.

After the cessation of the heart's action in death, the blood is brought in contact with the capillary mouths, by a power somewhat different from that which operates during life. In the first place, the arteries themselves contract to such a degree as to expel no inconsiderable share of their contents, and then the remaining blood is carried by the force of gravity, in contact with the capillary mouths. The whole body is a complete tissue of capillary vessels, and of course the large arterial trunks are surrounded by them on every side.

It is evident, therefore, that the body cannot be placed in such a position, that there will not be some descending branches, which will convey the blood to that part of the body which is lowest at the time, and thus enable it to be taken up by the veins.

Let us not, however, give one part of the circulating system an undue importance, to the prejudice of others, for it is evident that a healthy and equable motion of the blood requires a due consent of action in them all. We can, by no means, deny that the heart is capable of forcing the blood through the capillaries into the veins, because this can be done by the syringe after death. Such a circulation is, however, forced and violent, and, if unattended with a corresponding action in the capillaries, is incapable of serving the purposes of animal life.

This is exemplified in what takes place in the lungs after the section of the eighth pair of nerves. In this case the pulmonary artery is filled almost to bursting, with blood, yet its passage into the pulmonary veins is slow and difficult, the necessary change to arterial blood takes place in a very imperfect manner, and the animal soon expires.

The view which is taken in the foregoing observations, of the motion of the blood in the venous system, is principally derived from reasoning and observation, with very little reliance upon experiment. The experiments which are referred to, however, were made by different persons, and with views different from what they are here brought to support, and are, therefore, the more deserving of confidence. If the arguments advanced are well founded, they would tend to establish the following positions:

First. The motions of fluids passing through flexible compressible tubes, can neither be originated nor accelerated, by the direct and immediate pressure of the atmosphere on the coats of those tubes. The pressure of the atmosphere cannot, therefore, be the cause of the venous circulation. The theories of Dr. Barry and Dr. Armstrong, with regard to the effects of the tendency to a vacuum in the thorax and heart, upon the motion of the blood in the venous system, must, therefore, be considered without foundation. The same may be said of Dr. Carson's theory, with respect to the vacuity of the arteries after death.

Second. The motion of the blood in the veins must be produced by some "vis a tergo" existing in the heart, arteries, or capillaries. This is proved by the simple experiment of venesection.

Third. This "vis a tergo" cannot reside in the heart, because if it does, how shall we account for the emptiness of the arteries after death?

Fourth. It does not exist in the arteries themselves, because they do not contract so as completely to obliterate their cavities, and of course they could not entirely empty themselves of their contents after death.

Fifth. It must, therefore exist in the capillaries.

Note.—Connected with the subject of absorption, is that of "the Pulmonary Transpiration," concerning which some experiments have lately been made by Messrs. Breschet and Edwards, of Paris. An account of these experiments has been published in the Archives Generales. The following is

the statement which these gentlemen give of the objects which they had in view.

"Thinking that exhalation differed in no manner from absorption, except by acting in a reversed way, we imagined, that exhalation ought to be accelerated by every force which attracted the fluids from within outwards, as well as that absorption should be facilitated by that which pushes the fluids from without inwards. We supposed that inspiration was the principle agent, and that it ought to bring the fluids of the body mechanically to the surface of the mucous membrane of the lungs, while it caused the air to enter into those organs."

Having conceived this theory, they immediately set themselves to prove it by experiment. For this purpose they procured two dogs, and inserted the nose of a bellows into the trachea of one of them, in such a manner that they could force the air into the lungs, but permit none to pass out. They then threw a quantity of camphorated alcohol into the peritoneum of each of them. The result was just what might have been expected. In the dog whose respiration was free, the camphor quickly passed out by the lungs, and escaped from the system; in the other, as it could not escape in this manner, it became diffused through the various tissues of the whole animal. These experiments were repeated with both pure and phosphorated oil of turpentine, with similar results. Upon these results, Messrs. Breschet and Edwards make the following remarks.

"In the first animal, the sucking action of respiration appeared to have drawn into the pulmonary transpiration, all the turpentine, and to have attracted it from the other tissues. On the contrary, in the second, the pulmonary surface deprived of all sucking power, had not been penetrated by the turpentine more than the other tissues, and just in the same proportion." The conclusions which they make from these experiments are, "that the suction which accompanies every movement of breathing, is the cause which expels the liquid and gaseous substances accidentally mixed with the blood, more particularly by the pulmonary exhalation, than by the other exhalant surfaces of the body."

Before making the above dubious experiments concerning the effect, which the tendency to a vacuum, or (as Messrs. Breschet and Edwards term it) the suction upon the mucous membrane of the lungs during inspiration, has upon the pulmonary transpiration; perhaps it would have been a better mode of philosophizing, had these gentlemen taken the trouble to make a minute calculation, with respect to the degree in

which this suction usually exists. Had they done this they would have found, that the tendency to a vacuum on the mucous membrane of the lungs during inspiration, is not greater than that in the wake of a lady's fan; and to suppose this power capable of attracting the fluids of the various tissues of the whole body, into the pulmonary transpiration, is bordering on the absurd. The lungs are the channel by which various useless or noxious particles are eliminated from the blood; just as the kidneys are the organs by which other redundant particles are separated from the same fluid; but to suppose that the pulmonary transpiration is caused by the suction of the lungs, is just as unphilosophical as to suppose that the suction of urine is caused by the force of gravity. In fact the lungs are capable of *absorption* as well as of *transpiration*, in a greater degree than any other organ of the body; and the true solution of the phenomenon is to be found in the peculiar properties of their mucous membrane.

We must confess we should be better pleased to have a paper of a less controversial and more practical character from the pen of Dr. Bishop. At the same time we cannot refrain from observing, that although we do not accord with his opinions, and beleive that, in several instances, he has furnished arguments against himself, yet, he has upon the whole, displayed considerable ingenuity in maintaining them.—Eds.

PRIZE ESSAY.

The following is a Prize Essay which comes under the offer made in 1825, leaving the choice of subjects to candidates themselves: such essays as might be approved of, being entitled to a premium of fifty dollars, in books.

ART. III.—*On the Gangrænopsis or Gangrenous Erosion of the Cheek.* By SAMUEL JACKSON, M. D., of Northumberland, Pa.

———quæque ipse miserrima vidi.—VIRGIL.

THE science of medicine, however great the fabric, may, in one respect, be compared to the ant-hill; it is the aggregate labour of time, and of many successive generations; not raised by power and genius, but rather by the minute industry of those who are willing to bring what they can, and contribute their mite to the general stock, thus imitating the humble care of the myrmidonian race:

> Parvula, nam exemplo est, magni formica laboris
> Ore trahit quodcunque potest atque addit acervo
> Quem struit, haud ignara et non incauta futuri.
>
> HORAT. lib. 1. sat. 1.

We, therefore, venture to offer some observations, with the hope of drawing the attention of medical men to a disease either very little known or too much neglected; and of thus imposing on your numerous readers an obligation to communicate whatever they may have seen or learned, concerning the history and cure of a most intractable and deplorable malady.

This is the "*Gangrenous Erosion of the Cheek*," described by Underwood, by Burns, in his "Principles of Midwifery," by Van Swieten, in his Commentaries, art. *gangrene*, and possibly by many other writers with whose works we are yet unacquainted. We have ventured to say that it is very little known, because it is not generally mentioned by systematic authors, and also, because we have conversed with many respectable physicians who had never seen or heard of it. It has not even received an appropriate name; and as names, and even synonyma, are of the utmost importance in describing a disease, we beg leave to propose the term gangrænopsis, from γάγγραινα, gangrene, and ὄψις, the face; the most prominent pathognomonic of the disease being a gan-

grene of at least a portion of the face. We confess that this title does not entirely satisfy our wishes; but we are unable, even after considerable research, to invent a better. We shall first relate a few cases of the disease, and then offer some thoughts on its nature and method of cure.

Case I.—Mary, aged six years, daughter of John Eisely, of Sunbury, was seized, in Sept. 1822, with an epidemic remittent fever, which, in a few days, and before they obtained medical aid, had resolved itself into the intermittent form. I was called about the tenth day of her disease, when one side of her face was greatly swelled, pale, and shining; eye-lids of the same side so œdematous as to close the eye entirely; lips, and particularly the upper one, tumefied; saliva streaming from her mouth: breath highly offensive. My first impression was, that she was affected with mercury; but they assured me, as indeed they always did afterwards, *that she had taken no other medicine than the common purging salts,* which they had given without medical advice.*

Upon opening the mouth, I found on the inside of the tumefied cheek a patch of gangrene, about as large as a crown piece, and without any thing like a line of separation. It exhibited a singular ash colour, approaching to whiteness, but it was plainly the substance of the cheek which was dead and disorganized to a considerable depth. *The teeth were all fast, the gums sound and not the least sore on pressure,* nor did her breath smell precisely like that of a salivated patient. This affection had begun two or three days before, and had been steadily increasing. The disease was totally unknown to me; but the mere indications of cure were not supposed to be at all mysterious, though I am far from certain of having fallen on the most successful means of fulfilling them.

An epispastic was applied to the cheek, the mouth was very frequently washed with a succession of gargles, strong alum-water, Huxham's tinct., diluted muriat. acid; and bark, wine, elixir vit., and tonic diet were given as freely as the patient could bear them. The intermittent was checked at once, and the patient's health began to improve before the swelling of the cheek subsided in the least, or any line of separation could be seen. The tonic medicines and diet were continued, and another blister drawn as soon as the first was healed. But the state of the cheek meliorated slowly, and I was particularly struck with the obstinacy of the swelling and the inability of the

* As the question, whether mercury has any agency in this mischief, must come before us for discussion, we shall print in italics all that relates to the use of this mineral, in every case.

system to form a line of separation. About the 20th day from the time I was called, the slough came away, leaving a healthy ulcer which had nearly penetrated the cheek. *The teeth and gums were not in the least affected at any period of the disease.*

Case. II.—About the same time George Gaus of Sunbury, called me to visit his family, three of whom were ill of intermittent fever and dysentery. His daughter, about four or five years old, had also the cheek disease precisely similar to that of the above child, unless that there was very little, if any discharge of saliva. The father assured me that she had *not taken one particle of mercury in any form;* nor can I possibly believe, that either he or Eisely deceived me, or that they were deceived themselves: nor indeed ought this cause of itself to have excited any inquiries concerning this mineral, since it was not attended with any flow of saliva; *and moreover, as in the above case, the teeth and gums were in a healthy state.* Her dysentery was cured with large doses of calomel, jalap, and other purgatives; and at the same time a sufficient quantity of bark was given to check the fever. During this time probably not less than a hundred and fifty grs. of calomel were given, notwithstanding the state of the cheek. For the gangrene she was treated precisely as Eisely's daughter. She soon recovered her health, but with a frightful ulcer which, however, did not quite penetrate the cheek. How the ulcers, in these two cases, healed I know not, as I was soon taken with the epidemic myself, and confined for several weeks. I went to see these patients since writing the above: Eisely's daughter is dead, but the other is a blooming girl, without the least deformity. It is not probable that these sphacelations could have been arrested without medical aid, though it must be confessed that their character appeared to be rather indolent and obstinate, than inflammatory and phagedenic. They gave me no uneasiness at the time, but subsequent experience has convinced me, that had the debilitation of the primary diseases proceeded a few days longer, the patients might have been brought into the utmost danger.

Case. III.—This occurred September, 1823, in a child of Hannah Smith of Northumberland. He was a robust boy of three years old, who had been taken with epidemic remittent fever, for which he was treated with venesection, cathartics, antimonials, cold water to the head, and probably with something more that I cannot now recollect. He appeared to be going on well till about the tenth day, when he was taken

with an incessant agitation of all his limbs, his brain and mind being at the same time apparently quite unaffected. An epispastic was applied to each limb, and nauseating doses of tartar emetic, conjoined with laudanum were given every hour, with the hope of obtaining both an antispasmodic and a diaphoretic effect: the exact doses I do not recollect.*

This troublesome symptom subsided in about forty-eight hours, when the dreadful disease of which we are treating, was observed in the cheek. Its *prima facies* is so peculiar that we recognised it in one moment, as the same disease we had seen the year before, in the two preceding cases: a swelling and hardness of one cheek, with the upper lip slightly tumid, led us at once to suspect the existence of mischief within: nor were we disappointed. A little cineritious spot or rather tumour was seen behind the opening of the stenonian duct, without any symptom of inflammation near it, or in any other part of the mouth. As we were alive to the operations of mercury, it was not a little gratifying to find the teeth and gums apparently quite sound, and not the least sore on pressure; and also, that the saliva was not increased nor the breath offensive. By this time I had learned from Underwood and Burns, what I had no doubt read long before and forgotten, the history of the *gangrenous erosion of the cheek;* but having treated two cases successfully by blisters, a remedy these authors do not name, I felt comfortable hopes with respect to this.

The fever continued and therefore general tonics were not admissible. A blister was drawn on the cheek, and the mouth washed frequently with a strong solution of alum. At this time the swelling was very moderate and the mortification confined to a mere point. But the face swelled rapidly on that side and the gangrene proceeded without giving any hopes of a line of separation. In two days the pulse became soft and slow, and the fever being now arrested, we forthwith used tonic diet, bark, and elixir vit. with the bark poultice to the

* Of this peculiar convulsive affection, which I compared to *St. Vitus' dance*, I saw three cases that season, supervene on remittent fever. They were all in patients about the same age, and were all cured in a few days by the same means. In none was the brain affected, nor did the agitations subside for one single moment. They all appeared to die away very slowly under the continued use of laudanum and tartar emetic, given in as large doses as the patient could bear without too much puking. This was continued day and night, for the patient slept none, till the disease was observed to be on the decline, when the dose was gradually diminished. Blisters to the limbs were also applied in every case; perhaps they were useful in breaking the fever, if not in removing the convulsive affection.

face. The mouth was washed alternately with Huxham's tinct. and muriatic acid diluted with four times its weight of water, and the sphacelated part was circumscribed twice a day with the nitrate of mercury according to the plan of Mr. Kirkland, until it was fairly ascertained to be utterly useless. The disease continued its deadly progress till the poor child was relieved of life about the twenty-fifth day of the gangrene.

During all this time he suffered very little if any pain, and he had a ravenous appetite till the last two or three days, though much poisonous matter must have been continually passing into his stomach. In fact we were greatly surprised to find him living so long, when we considered the deleterious effects of mortification on the general system, which in this case we did nothing to counteract after we found it impossible to preserve a tolerable visage.

One side of this poor child's face was literally destroyed as high as the frontal sinus; the teeth, maxillary, malar, palate, nasal, and orbitar bones were cast off or were picked away by the patient; one whole side of the face, including the mouth, chin, nose, and one eye were eaten away—a horrible sight which even to name is a revolting duty. Yet even in this deplorable state of things, many parts of the face put on signs of healing; and as the patient had a good appetite, we felt no little alarm lest he might continue to live in this awful condition. This child had taken some purges of cal. jal. and scamm. in composition, all which operated freely; the breath was not that of a salivated patient, there was no flow of saliva as in the first case, nor did he take any calomel which was not combined with the above mentioned active cathartics. We gave him large doses of laudanum in order that he might sleep away in comfort the remainder of his life, and that the mother might attend to the rest of her family, all of whom were sick; and it is a little surprising that, towards the last, he would take more than half an ounce in 24 hours, without procuring more than ordinary sleep.

Case. IV.—In August, 1825, we saw a case exactly similar to this in the town of Milton, 12 miles above us. It was in a boy of four or five years old, the son of one *Miller* who still resides in that borough. The patient had been treated for bilious fever and had, like the little Smith, taken purges containing calomel; and like him too, nearly the whole face was eaten away, after the sphacelation had lasted several weeks. We believe that no calomel was given which had not been combined with more active cathartics; but we have no means of getting at the exact history of the case.

Case. V.—This was the next that came under my own care, and *horribile dictu*, it was in my own child. This little girl, less than two years old, was debilitated by a variety of diseases in too rapid succession; an attack of habitual intermittent, cynanche-tonsillaris, measles, inflammation of the lungs, influenza, and finally her intermittent again, all which confined her about ten weeks, and had nearly brought her to the grave. When she was in a state of extreme weakness, we observed one side of her face a little swelled. I recognised the tumour at once, and heard, with the utmost dismay, the little sufferer say *cheek, cheek*, while at the same time, she put her hand to the affected part. On opening her mouth I found the characteristic gangrene; but it was not larger than a dime piece, and was nearly circumscribed with a healthy periphery. Her catenation of maladies having ended in her old intermittent, we were ready to give quinine and tonic diet.

This case was attended with an odour of the breath altogether peculiar and indescribable. *Only one dose of calomel had been given as a purge, and there was no affection whatever of the teeth or gums, nor any flow of saliva.*

Case. VI.—In July 1826. I attended a little girl of five years old, the daughter of Jacob Troxell, two miles above Northumberland. The primary disease was epidemic remittent fever, which proved rather stubborn, though not apparently very severe. She was bled twice, *took two doses of calomel with jalap*, and afterwards castor oil, jalap with scammony, and sometimes small frequent doses of gamboge. Nauseating doses of tartar emetic were used freely whenever they could be given without interfering with the operation of cathartics. She had constantly a severe pain in her head, and therefore cold water was frequently poured upon it from a pitcher, a remedy from which my patients have always derived great advantage in headach from bilious fever.

All appeared to go on pretty well till about the tenth day, when we observed a swelling of the cheek and lip, with the lower eye-lid œdematous; and upon opening her mouth, I beheld with horror the fatal gangrene, occupying the same place as it did in the preceding cases. *The teeth and gums were not affected in the least degree, nor was there any discharge of saliva.* Her breath had the same indescribable odour, as had that of my own child.

The fever still continuing, rendered tonics inadmissible. An epispastic, assisted by Dr. Hartshorne's terebinthinate decoction of flies, was applied to the cheek; the mouth was

washed with strong gargles of alum-water; the gangrenous spot was circumscribed by a liberal application of lunar caustic.

The second day I found that the epispastic had drawn freely, but that the cheek was more swelled; and that the gangrene had passed the cauterized line on every side. The caustic was again applied, the blister dressed with basilicon, and it was directed that the mouth should be washed very frequently with muriatic acid, diluted with six times its bulk of water. She was also directed to take a teaspoon-ful of the diluted acid every two hours, but still further diluted and mollified with sugar.

The third day her face was still more swelled, the gangrene had spread on all sides, but particularly towards the mouth, the whole face wore rather a livid hue, the cheek was nearly penetrated, the fever was so far gone, that quinine and tonic diet were given, the mouth was injected with the diluted acid and with undiluted Huxham's tinct., alternately used, the acid was still given internally, a poultice of the strongest Lima bark was applied to the face.

The fourth morning all the symptoms were more unfavourable. A black spot appeared on the cheek opposite to the sore within, and the gangrene had spread rapidly towards the mouth. Until this morning I could not find that the teeth and gums were at all affected, but now the caninus and molares, on that side of the upper jaw, were loose, and the gums were cast off from the teeth and completely livid. The tonic diet and medicine were continued, and given, we believe, as liberally as the stomach would bear them, for the unfortunate little sufferer was always ready to take any thing that was offered her.

The fifth day all the symptoms were more distressing, and hope was now reposed in death rather than medicine. It is, therefore, not necessary to trace the progress of the disease from day to day; suffice it to say, that it advanced with a steady pace till it reached the mouth and nose, and she died about the sixteenth day of the gangrene. During the whole progress of the disease, there was no heat, no pain, no redness either within or without, no symptom of inflammation but the swelling. There was no diarrhœa either in this or the preceding fatal case, which is a little remarkable under such circumstances, for much putrid matter must have been continually passing into the stomach.

Case VII.—A few weeks after this case terminated, Harriet, aged five years, daughter of J. Hepburn, Esq., of this

town, had a pretty severe attack of bilious remittent fever, which was converted into intermittent about the eighth day, and cured by quinine. Hardly was this accomplished, when her father came to me in the greatest alarm, lest his daughter had been salivated. I was horror-struck with this intelligence, supposing that it was the same disease of which I had so recently lost Troxell's child. My anticipations were realized: her cheek presented the diagnostic swelling, the saliva streamed from her mouth, her breath had that peculiar smell which so strongly characterized that of my own and Troxell's child, there was a foul looking ulcer at the usual place of the gangrene.

As the fever was conquered, and the patient improving in health, under the use of quinine, wine, and soup, all which she had been taking for the last twenty-four hours, I entertained but little fear for the event, and, therefore, gave the parents no further insight into the disease till it was cured. The patient was strengthened by every means in our power, as quinine, vitriol, wine, and soup; the mouth was washed with diluted camphorated spirits, the face frequently bathed with warm, camphorated oil, and wrapped in flannel. The symptoms meliorated daily, and the patient was soon restored to health. Now, had the gangrene supervened a few days earlier, while the fever was still raging, and, therefore, the debilitation still going on, it would most probably have ended in death, or in a deformity worse than death. In this case only *ten grains of calomel had been given, and the operation of this was promoted by small, frequent doses of gamboge, and purgative injections.* And here the intelligent advocate of calomel will, no doubt, be surprised that we did not use this medicine more freely, in several of the above cases. But it must be remembered, that the mind is not always equally able to resist the force of impressions, as a man is sometimes startled in the dark, who was frightened with ghosts when a child:

> Nam veluti pueri trepidant atque omnia cæcis
> In tenebris metuunt, sic nos in luce timemus.
>
> LUCRET. l. II.

And thus sometimes, under temporary feelings of dismay, we gave less calomel than we had been accustomed to do, before we saw Smith and Miller's children perish of the cheek disease.

The malady of which we are treating is no doubt, the *gangrenous erosion of the cheek*, described by Underwood, in his

work on the diseases of children; and as your paper may pass into the hands of persons unacquainted with that useful book, we shall here insert the whole of the chapter on this interesting subject.

"This complaint has some resemblance to the canker, though it is much more dangerous, and is not a mere local disease. I have seen no clear account of it in any late writer but Mr. Dease of Dublin, who seems to have met with the disorder pretty frequently, and describes it very accurately in his tract on the Diseases of Lying-in Women, &c. to which I am very much indebted on this occasion. Mr. Hurlock, indeed, in his Treatise on Dentition, printed in 1747, mentions a complaint that seems to be of this kind, though he does not appear to be well acquainted with it.

"It usually attacks children from two to six or eight years of age, especially the unhealthy, and such as have been subject to worms. The whole body often feels cold on the approach of the disease; after which a black spot appears on one of the cheeks or lips and spreads fast; but without any marks of inflammation. Oftentimes the whole side of the face is eaten away, together with the lip, so that the bare jaw-bone and inside of the mouth appear. In the end, the entire lower jaw falls down on the breast, and the whole side of the face is dissolved into a putrid mass; a colliquative diarrhœa taking place from the offensive matter that is continually swallowed, especially by very young children.

"In the cure, internal as well as external remedies are required; but only such as correct putrescency, and support the strength, seem to be of any use. A few drops of the acidum muriatic, therefore, taken inwardly, in the infus. rosæ, or in the child's drink; the saline draught in effervescence; and in the end, the bark, in doses suited to the age, with good broths, jellies and wine, are the proper remedies. The parts should be washed, and likewise injected with muriatic acid in chamomile, or sage tea, and afterwards dressed with the acid mixed with honey of roses, and over all a carrot poultice. The child should in the mean time be gently purged with magnesia or rhubarb, to carry down the putrid matters it may have swallowed. By this treatment, Mr. Dease informs us, he has recovered every patient except one, since he had recourse to this plan, which the world is much indebted to him for making public; though fortunately this complaint does not appear to be, by any means, a common one."

There is also a chapter in Burns' Principles of Midwifery, which we shall insert, in order to render this essay more

complete and satisfactory. These chapters will show, that however deplorable those distinguished authors considered the disease, they did not adopt a very active method of cure, and that a laudable routine of remedies is still greatly to be desired.

"Another corroding disease begins in the cheek itself, or the lip. It commences with some degree of swelling, which is hard, and firm, and shining. It generally begins on the cheek, which becomes larger than the other, and the upper lip becomes rigid, swollen, and glossy. On some part of the tumified skin, generally on the cheek, we observe presently a livid spot, which ulcerates and spreads, but laterally and downwards. Being generally seated near the mouth, it soon reaches the gums; and even the tongue partakes of this disease, which is of horrible aspect. We often find a great part of the upper or under lip destroyed, perhaps only a flap or portion of the prolabium left, all the rest being eaten away. The gums are foul, the teeth loose, the tongue thickened, partly destroyed, and lying so close on other diseased parts, that we cannot say what is tongue or what gum, except by the child moving the tongue; and the mouth itself is filled with saliva. The ulcer is foul, shows no granulations, but appears covered with a rough irregular coat of brown lymph. The surrounding parts are somewhat swelled: near the ulcer they are hard and red; farther out on the cheek, they are paler, and have more of an œdematous look. These local appearances are accompanied with emaciation and fever, and the child is either restless, or lies moaning in a drowsy state. This disease often proves fatal; sometimes, indeed, the parts cicatrize, or the patient recovers after an exfoliation of part of the jaw-bone. This ulcer is best managed with stimulants, such as diluted muriatic acid, solution of nitrate of silver, camphorated spirit of wine, tincture of opium, &c. but sometimes it is necessary to give these up for a carrot or a fermenting poultice. The bowels are to be kept open, the strength supported by milk, soups, and wine; and acids, with ripe fruit, given liberally. Before ulceration takes place, the best application is camphorated spirit of wine, or we employ friction, with camphorated liniment. A course of gentle laxatives is useful.

"Another disease, destroying the parts, is called noma, which differs from the former, in destroying rather by gangrene than ulceration. It attacks chiefly the cheeks and labia pudendi of children, and begins with a livid spot without pain, heat, or swelling, or with very little; and is not pre-

ceded by fever. It ends in gangrene, which destroys the part, and the patient often dies in a few days. It is to be treated with saturnine applications, or a fermenting poultice, whilst opium and wine are given internally, with or without bark, according as the stomach will bear. The bowels must also be excited to action."

This erosion, and this noma, are no doubt one disease, and the very same as that of which we are treating. We have however, never seen the tongue affected, nor the gangrene begin on the outside of the cheeks, nor on the lips. The noma, Mr. Burns tells us, "attacks the cheeks and labia pudendorum of children."—"It sometimes takes place after measles and scarlet fever, and may be conjoined with the induration of the cheek or lip previously described." This loose way of writing upon an important subject, gave us no satisfactory information, and therefore, we turned to the dictionary. Parr says that "Noma, from νεμω to eat, is a phagedenic ulcer, sometimes a species of herpes." The definition in Rees' Cyclopædia amounts to the same. Hooper's Quinsy says, "that nomæ are ulcers that sometimes attack the cheek or vulva of young girls, that they appear in form of red and somewhat livid spots, are not attended with pyrexia, pain, or tumor, and in a few days become gangrenous." This reminds us of a most interesting paper in the Eclect. Repert. vol. 7th, on the "history of a very fatal affection of the pudenda of female children," by Kinder Wood, Esq. And since this useful paper is buried in the mass of an obsolete periodical, we shall endeavour to abridge it, for the use of your numerous readers; but particularly because we believe it must be the real noma alluded to above, a malady that appears to be very little known. The author saw twelve cases in nine years, all of them in children between one and six years old. Ten of them proved fatal, owing as he supposed, to his being called too late.

The common symptoms of fever precede the local disease about three days; the bowels are torpid and the patient languid. She is now observed to have pain in passing water, and the labia are found covered with inflammation of a dark tint. Vesicles are soon formed both within and without, which burst and the consequent ulcers quickly spread and run into each other. A copious and offensive discharge irritates the adjacent parts, and spreads the disease to the anus and even over the mons veneris.

After the inflammation commences the pulse is quick and irritable; the face soon becomes of a peculiar pallid hue, or of a singular whiteness; the bowels are torpid, and cathartics

uniformly bring away dark, slimy, offensive stools; the pain on moving the pelvis is excruciating, and therefore the patient lies constantly on her back with her knees thrown open; the urine is retained on account of pain in passing it, a circumstance that should never be overlooked by the medical attendant.

As the disease advances, it forms a deep, foul ulcer, that rapidly destroys the external organs of generation; the discharge increases with the increasing ulcer, and becoming more and more offensive, the patient is finally exhausted. If, however, the disease meets with early and proper attention, the ulcers are healed, but not without leaving the constitution debilitated and injured; for there follows a copious discharge, which hinders the patient from recovering strength, and favours the recurrence of the disease—a circumstance that occurred to the writer in two cases, one of which proved fatal.

The duration of the disease is uncertain; in one case the patient became better in twenty-three days, in the second she recovered in seventeen; but the consequent mucous discharge, and general debility, continued from six to eight weeks. He once saw it end in mortification, and in this case, which proved fatal, strong stimulants had been used, under which the parts swelled greatly and sphacelated.

His treatment consisted, 1st. In moving the sluggish bowels with calomel and rhubarb, which uniformly brought away dark and offensive stools. 2d. In washing with weak lead-water, slightly aired, and covering the parts immediately with warm poultices, made of the same lotion, and crumbs of bread. These remedies were used till ulceration was checked, and longer, if tenderness, excoriation, or apthæ appeared on the adjacent parts. 3d. The ointment of white lead was used when the ulcerating process was stopped. 4th. Bark in decoction with confect. aromat. and tinct. columb., with small doses of laud. 5th. The bowels receive the necessary attention, and red wine is given according to circumstances.

Though we have never seen this malady, we cannot help considering the doctor's remediate measures as rather inefficient; and we are not at all surprised that he found himself called too late in ten of the twelve cases, the whole number that he had seen at the time of his writing. Whether he used any other means in these ten fatal cases we are not informed, and this we consider as a very great defect in his truly laudable and well-written history. We would particularly

inquire, why he did not use the catheter, since the passing of urine was so painful as to induce the patient to retain it, even to his manifest injury. If the local disease prevented him, we ought at least to have been told so. *Sed non omni omnia*— he must be a wise physician who never errs: and this little maxim we would thank the reader to remember, during his perusal of the present pages.

In one respect, a knowledge of this disease may prove of the utmost importance to the safety of individuals. It not unfrequently happens, when young girls are diseased in these parts, that some one is supposed to have committed violence, or to have communicated a contagious disease; and that innocent persons are thus brought to the bar on charge of a rape or other misdemeanor. The author relates one case in which the circumstances appeared so strong against a young lad, and the disease so suspicious, that he himself deposed before the coroner's inquest, that he believed it to have come by external violence; whereupon a verdict of murder was given, and the accused person fled. The occurrence of a few more cases, however, soon convinced him of his error; the boy was, therefore, encouraged to return and surrender, whereupon the judge charged the jury in his favour, and he was instantly acquitted.

The writer thinks it necessary to show, that this disease is different from intertrigo and from infantile erysipelas, but we cannot help fancying that he might have spared himself the trouble. He thinks it probable that Armstrong had seen some similar cases, as might be gathered from his work on the diseases of children. Whether it be the *noma* we know not; but if it have any cognation with diseases of the mouth, we would rather associate it with canker. This last disease we have often seen after the measles: and scarlet fever is often followed, as every one knows, by a spongy, swelled, and hemorrhagic state of the gums, that is sometimes succeeded by ulceration, and sometimes also by tumid lips, thus showing a susceptibility of these parts, which attracts and fixes the relics of the general affection. Mr. Wood's disease sometimes runs into mortification; so does the canker of the mouth, thus exuberating, as it were, into the gangrænopsis. We must confess, however, that we know not any reason for associating the disease of the mouth with that of the genital organs, unless what is derived from the above definition of quinsy, and from the above mentioned careless assertion of Burns. Their *noma*, when it affects the genital organs, is most probably nothing more than foul ulcers, resulting from

the state of these peculiar parts, acted on by the peculiar irritation of the general disease. Thus, it ought not to surprise us, if ulcers of the labia should sometimes follow scarlatina, or even the measles, when they are of a low type, and particularly if strict cleanliness be not regarded; for excessive heat, the natural discharges, some friction, all conspire to attract the general disease to that part; and when ulcers are once begun, the state of the system, at this time, must contribute greatly to propagate, and to render them phagedenic and incurable. If Mr. Burns had known the noma of the labia conjoined with that of the mouth, he ought to have said so; if he had read the history of such cases, he ought to have given his author; but his phrase, "may be conjoined," is altogether unsatisfactory, in a disease concerning which so little has been written.

From these considerations, then, the following propositions will rationally follow:

1. That Mr. Wood's disease is the real noma.

2. That in scarlatina, and even rubeola of a low type, there may arise an ulceration of the genital organs, if cleanliness be not observed.

3. That this may exuberate into something malignant, and be, therefore, denominated, with strict propriety, the noma.

4. That this noma may have no relationship with diseases of the mouth.

5. That the gangrænopsis may often take place in the scarlet fever, and even in the measles of a low type, as well as in dysentery and remittent fever. In the case of my own child it followed the measles.

6. That, should the noma of the labia pudendi be, by chance, attended with the cheek disease after measles and scarlet fever, this coincidence does not prove an identity, unless it can be shown that the disease may be translated from one part to the other.

Etiology of the gangrænopsis.—We very cordially agree with the prince of poets in his, *felix qui potuit rerum cognoscere causas;* but to this happiness we cannot, in the present case, make any pretensions. This ignorance, however, is the fate of medical men. We are not unfrequently troubled no little to answer the question, what is the cause; and we must either confess honestly, that we do not know, or run into a disquisition that neither ourselves nor the patient can possibly understand. Yet it is truly surprising what satisfaction this semblance of knowledge, however delusive, affords to the ignorant multitude. The learned and the unlearned,

the wise and the simple are equally delighted with a catenation of words, which conveys no more meaning to their minds than the whistling of winds. I once remonstrated with a learned physician for using language which our patient could not understand, he jocosely replied, "I did not understand it myself."

In the present case, however, we must discuss the question whether mercury has any agency in the mischief; and with this intention before us we have printed in italics, the quantity of calomel that was given to each of the patients. Underwood and Burns do not name this mineral: it is true they do not tell us that they ever saw the disease, and it is most probable that at least Underwood never did, since, as Dr. Coates informs us, his chapter "is wholly borrowed from a work by Mr. Dease of Dublin, on the diseases of lying-in women." That it may take place without the agency of mercury we do not hesitate to aver in the most positive terms. In my two first cases, I made such inquiry as would have resulted in satisfying the most obstinate sceptic, that not one particle of the medicine could have been taken; and this inquisition was the more persevering because my first impression was, that Eisly's daughter was salivated. It is true that all my other patients took calomel as a purgative, but it was conjoined with, or immediately followed by some more active cathartic which generally operated freely; and it is equally true that physicians are in the daily practice of giving more calomel than was given to these unfortunate children, and that too, without any consequent mischief. That rule of philosophizing, therefore, which refers the same phenomena to the same cause, excludes calomel as a direct agent in the gangrænopsis: we shall now inquire whether it can be considered as a predisposing cause.

All the cases that we have seen were preceded by bilious fever, a disease that generally has a tendency to spend its violence on some particular part; and therefore, if any irritation, and particularly one that debilitates, should attract and fix the morbific influence, a mortification may be the consequence. In one case of this fever, we knew blisters to mortify, and in several instances we have known a lingering sphacelation of the soft parts, covering the lumbar vertebræ. Upon this principle then can mercury have an indirect agency in the gangrænopsis? It is well known that children cannot be easily salivated; but is it not reasonable to suppose that mercury has even in them its specific tendency to the jaws; and if so, may it not predispose these parts to this fatal gangrene, and create that morbific attraction that brings upon

them the whole weight of the general disease? *Pars dolens trahit* is a maxim in medicine as true as any of the Newtonian Principia, and is of wonderful efficacy in explaining the mysteries of morbid catenations. In confirmation of the above opinion we have to relate the case of a little girl, about eight years old, who perished of this disease after her face was almost wholly destroyed.

She was first taken with an epidemic remittent fever, and her physician, a man of more than ordinary talents, told me, that finding her head affected beyond the reach of ordinary remedies, he attempted to salivate her: that after some days a pimple appeared on the inside of the lip which soon after became gangrenous, spread to the gums, and ended in the disease of which we are treating. The parents refused to have a blister drawn, by which, the physician had hoped to arrest the gangrene.

The same physician, in conjunction with another, attended a man about the same time, for remittent fever, for which they thought proper to salivate. The medicine did not operate to their satisfaction nor produce ptyalism; but while they were still giving it, a gangrenous patch appeared on the inside of the lower lip, and assumed an alarming appearance. They very dexterously wrapped up the whole lip and chin, in an epispastic which arrested the gangrene, and effected a healthy sloughing, though the patient was already sinking under the primary disease.

Now these cases might lead a prejudiced mind to refer the mischief to mercury, but it is clear to any rational, unprepossessed understanding that this mineral might have had no agency in the matter. In both cases there was a certain febrile erithism which perverted the just operation of medicine, and mercury appeared to be the only agent capable of deobstructing the system, and of restoring healthy excitement. It is most likely that the system felt not its influence at all, and that the gangrene was, in both cases, the result of the general disease now thrown on the jaws by some unknown influence. While these two cases were the subjects of discussion to those interested, one of the medical gentlemen was called to a little girl in the same town, who had been attacked with bilious remittent fever, and had taken no mercury whatever: she too had the cheek disease. But a large blister to the face and other appropriate treatment, which I do not now recollect, very quickly arrested its progress. I can vouch for the honour and integrity of the medical gentlemen who gave me the outlines of these three cases.

I well remember that Dr. Rush used to caution the students of his numerous class, against attempting to salivate patients under six years old, lest the mercury should produce a mortification of the jaws; and we believe that he was accustomed to add this very phrase, which has long been familiar to our ears—"several cases of which have happened in this city, attended by circumstances of great distress." In turning to some notes which we took of his *Therapeutics*, and of that part of them which treated of salivation, I found the following words:—"it is forbidden in children under six years old, as their tender jaws are not able to withstand this powerful stimulus; they run into gangrene." Such a caution from this undaunted practitioner, must have been founded either in observation or reading. This, therefore, leads us directly to a very important part of our essay, which may serve to confirm the utility of the professor's injunctions. Though I am well satisfied that mercury has no direct agency in the gangrænopsis, yet I have met with three cases of exfoliation of the alveolar processes in children, which may have been owing to the perverted operation of this mineral.

Case I.—A child of three years old I bled frequently for inflammation of the lungs, which had run on too long without medical aid. Tartar emetic was constantly given in nauseating doses, blisters were used freely, and finally, when no more blood could be let, the calomel was given in doses of five grains, twice a day, as an expectorant, and the tartar emetic was given during the intervening hours, as fast as the stomach and bowels could bear it. The cough became loose in a few days, and the fever abated; but the child's breath was now intolerably offensive, and upon examination, I found the lower teeth on one side loose, and the gums fallen off. The teeth were easily removed, and the mouth was washed with charcoal and diluted Hux. tinct. The alveolar processes came away, and the ulcer healed without difficulty. The breath was not mercurial nor was there any ptyalism.

Case II.—A little boy, eight years old, had the epidemic remittent fever, for which he took, towards the decline of the disease, several doses of calomel, each ten grains, without any other cathartic. After a few days he complained that his upper jaw was sore, and, upon examination, I found that his teeth were loose, and the gums fallen off. As in the above case, there was no ptyalism, and the breath was offensive but not mercurial. The mouth was washed with diluted Hux. tinct., and, as he complained of headach, a blister was drawn on the back of his neck. Before the next day the gums were

gangrenous and the cheek was swelled, but it did not assume the appearance of gangrænopsis. The teeth were very easily removed, a blister was drawn on the cheek, and the gargle continued.

Before the third day, the mortification had spread to the inside of the cheek; but it is not necessary to trace the daily progress of the disease; suffice it to say, that a large piece of the maxillary bone exfoliated, and not without great distress and general febrile irritation for several weeks. He finally recovered his health, but a little depression is still seen below the malar bone. This boy was repeatedly blistered on the cheek, the mouth was attentively washed with alum water, Hux. tinct., diluted muriatic acid, in succession and rotation, all carefully injected every hour with a syringe; and bark, with vit. and tonic diet, were given liberally, till a line of separation was distinctly formed, and the exfoliated portion found to be loose. In this case let it be remembered that the disease did not begin in the cheek, but that it spread thither from the gums.

Case III.—This, too, began with remittent fever, in a boy about eight years old. He took calomel several times as a purgative, and, towards the twelfth day of the disease, the teeth on one side of the lower jaw fell out, or were removed by the patient himself, and the socket exfoliated. There was ulceration but no sloughing of the soft parts. He recovered under the same treatment that was used in the preceding case, without any external deformity. In none of these cases was there any thing similar to that characteristic swelling of the cheek, by which the gangrænopsis was instantly recognized.

Though these three cases cannot certainly be referred to the use of mercury, yet, it must be confessed, they have rendered me no little fearful of using this medicine in children, as freely as I formerly did. But when we consider how extensively it is used in cases of croup, worms, fevers, hydrocephalus, and how generally innoxious it has proven to children, I am almost ready to refer even this exfoliation to some latent attraction of the fever to the diseased part. It has, however, been observed, that emet. tart., whether given to nauseate or to produce full emesis, is apt to determine the operation of calomel to the jaws; now, in cases of worms, we do not give the tartar in conjunction with calomel, in croup, the time is too short to effect this mischief, and in hydrocephalus, we can hardly touch the system with mercury in any form.

In the gangrænopsis, therefore, I do not admit the direct agency of mercury; in this exfoliation I have some fears. Nauseating doses of emet. tart. were given in every case daily, for many days, and it is very possible that it might have determined the operations of the mercury in this unfortunate way. Nor can this hypothesis be overturned by any argument derived from the general innoxious use of the medicine. The common practice with calomel is safe and salutary; but there is no rule in the uncertain sciences to which there is not an occasional exception. We all know that a single dose of calomel, even when purged off very briskly, will sometimes salivate an adult with great severity. The most distressing salivation that I ever saw, was effected by four grains of calomel, in such combination, as to purge and puke the patient with the utmost vehemence. In the present state of our knowledge, we consider this an aberration from the laws of nature—why should nature not prove a little capricious in children also, and sometimes produce a determination of mercury to the jaws contrary to her accustomed operations?

If the reader inquire why we gave calomel as a purge, without any more active cathartic, we shall answer that, in our opinion, it is by no means a laudable practice; and here let us remind him that it was not done in any of the cases of gangrænopsis. Children are often so unmanageable, or their nurses so tender, that it is with the utmost difficulty we can find means of giving them any thing else. I have lately been in the practice of giving the calomel first, and afterwards the jalap mixed with water; in this way it can be forced down their throats, and the portion that is lost can be easily supplied from another dose. This method I have found more satisfactory than that of mixing the compound medicine with jelly. To purge off calomel we have also tried gamboge in small, frequent doses, according to the method of Dr. Ferriar, but it very seldom operated to our satisfaction. But upon reviewing the practice of giving calomel uncombined, we have probably imagined many evils that seldom obtain. It is a heavy mineral that may settle to the bottom of the stomach, and becoming involved in the mucus of the first passages, it may lie dormant till brought into action when the quantity is greatly accumulated. Thus we have somewhere read, that an examination after death demonstrated, that the whole quantity of calomel given was then imbedded in the intestinal mucus. This we cannot but consider as one of the most important facts in modern medicine, as every thing must

be important, which throws any light upon the apparent aberrations of this most noble mineral. But whatever physician is frightened from a liberal use of calomel, his practice will be far less satisfactory to himself, and less beneficial to his patients. The wonderful powers of this medicine in many diseases of children, and particularly in those attended with bile, can never be sufficiently praised. A little child labouring under languor, dejection of spirits, slow fever, and diarrhœa, with offensive, bilious discharges, may sometimes be treated with the whole routine of the old school, rhubarb raw and spiced, magnesia, crab's eyes, and much more that we need not name; and after all these are given unavailingly, behold! a dose of calomel carries off the whole disease, and the next day the little sufferer has natural stools, and calls for food. In a few weeks he is attacked again, another dose of this noble cholagogue is given, and the patient purged and puked into health in one single day. But it appears from the experience of the few last years, that we have heretofore known but little of the wonderful virtues of this article, and that in the future knowledge of this and of tart. emetic, lies hidden one half of the expected improvements of practical medicine.

Why the croton oil was not given in some of the above cases I know not, for I have found it next to calomel, the most useful cholagogue medicine in children, and by far the most easily given to a refractory child. It is not a little unfortunate that this excellent medicine should come at so high a price; but this ought to be no obstacle when danger stares us in the face. The price too is not a little enhanced by the present inferiority of the oil. When it first reached us, a single drop was sufficient for an adult, but no sooner is the reputation of the medicine established, than ten are required for the same person.

We have now laid all the facts before the reader, and his opinion will, notwithstanding, be determined by his prejudice: if he has learned any thing further, let him communicate freely on the subject. For our own part, we believe that mercury has no direct agency in the gangrænopsis. It may possibly irritate and predispose the part, and thus establish a catenation of morbid attraction, and so may any other local and debilitating irritation. Upon this principle we have supposed that the disease may arise from any injury done to the part, while the system is pervaded by a sphacelating influence, as no doubt it is in many cases of fever. As to my own child, I fancied that she injured the part between the molar teeth, and I had thoughts of removing at least one of them: from this

however, I was deterred by fear of attracting the disease to the jaw. In the remittent fever, children are very often seized with convulsions, in which it is evident they might bite and bruise the part on which the gangrene usually begins. There is now a justice of the peace in this town, a man of great respectability, whose grand child in Virginia is disfigured by the gangrænopsis. It appeared in her cheek immediately after convulsions from fever. She lost none of her teeth, but the cheek was corroded quite through its substance. It has already been said, that I have frequently seen the remittent fever produce a mortification of the soft parts covering the lumbar vertebræ—as a counterpart to this, I observed that Troxell's child, who died of the gangrænopsis, lay constantly on the side afterwards diseased, with her hand under her cheek. About the period of life at which this disease sometimes occurs, the patients are about cutting their first permanent teeth; this circumstance had nothing to do with any of the above cases.

To the usual question then, what is the disease, permit us to answer that we do not know. Neither do we know what is pleurisy, gout, rheumatiom, or any of the numerous maladies to which we are subject. There are many diseases of the human body that may be associated, because a long succession of observations on their character and methods of cure, has rendered it probable, that they are of similar, if not of an identical nature:—is there no disease, then, with which to associate the gangrænopsis? We answer that we know of none; nor do we consider it a matter of any importance, whether it stands in our books as an isolated disease, or whether it finds some congruous place in Dr. Good's nosology. The *canker of the mouth* sometimes runs into gangrene of the face, but this is a very different disease; and lest any of our readers should be of a different mind, we shall here give the reasons of our opinion; and this will be most effectually done by laying before them a short history of the canker, which we shall abridge from Dr. Coates' truly excellent essay on that disease, in the third number of the North America Medical and Surgical Journal.

It commences at the edges of the gums and generally in those of the lower incisores. The gums are more or less separated from the teeth, and, in the great majority of patients, they have a whitish discoloration; in a very few cases, they have been found a little inflamed. In this state the disease often continues for a long time, even for several months; and so common was it in the children of the Asylum,

that of 240 inmates, no less than 70 were found affected with it at the same time. In this early stage, and until the local disease makes further progress, there is no apparent general irritation, no nocturnal fever, nothing to be observed but loss of appetite and other symptoms of general debility. If, however, the disease be not checked either by medicine or the powers of nature, it spreads to the adjacent gums and passes down into the socket: the teeth become loose and when drawn they are found denuded of periosteum. The Dr. is even of opinion that this membrane is the primary seat of the malady. If the disease be of the worst kind, it often proceeds rapidly, the ulcers become of the sloughing kind and necrosis involves the socket. Now for the first time a fever from irritation is manifest, and it appears to arise from inflammation of the mouth—a secondary symptom, apparently caused by the acrimony of the discharge.

So much for the canker before it reaches the cheek; but from this account, which comes from the best authority, we can form no image of the disease of which we are treating. We have often seen the canker in children of the poor, and uniformly cured it very quickly, by extracting the teeth, and applying white vitriol pulverised with an equal portion of sugar. We have never seen it run into gangrene, owing perhaps to the more salubrious air in which we reside.

We shall go on to abridge the Dr's. history. He has often seen the gangrene spread from the gums to the cheeks and lips, and bad cases generally end in this way. Symptoms of inflammation are now manifest, the whole cheek swells and assumes a smooth, polished, dense, white appearance, resembling the effects of a violent salivation. A black spot is now frequently seen on the outer surface of the tumour, which spreads rapidly, and this has been, in Dr. Coates' manifold experience, the immediate harbinger of death. "The closing stage of this affection is marked by large gangrenous patches in the gums, deep fissures between these and the teeth, the latter loose and falling out; the whole lining membrane of the mouth suffering a violent excoriation; the whole adjacent external cellular substance hard and swelled; large gangrenous spots on the inside of the cheek or lips, sometimes extending quite through to the outer surface; a total incapability of sleeping or of taking the least food; fever; a swelled abdomen and diarrhœa."

Now in all this train of evils, we can see no likeness to the disease of which we are treating. It is true that it ends in mortification of the cheek, which is preceded by a swelling

very similar to that which ushers in the gangrænopsis; but this fact only proves the truth of Dr. Coates' observation, "that there is a great liability to gangrene in more than one part of the mouth." Our malady seems to begin at the point where the canker is about to end; but even suppose that they end alike, this circumstance no more proves their identity than it proves that all diseases are one, which end in mortification of the same part. Gangrene of the cheek, was the immediate harbinger of death in the canker, but in the gangrænopsis it was almost the first symptom, and it continued for several weeks, till the greater part of the face was destroyed. The mortified cheek from canker appears to arise from a local disease at the roots of the teeth—the gangrænopsis is the fatal termination of a general fever. In one the labour of the physician generally ends where the gangrene begins—in the other, his care and sorrow only then commence. So that neither in their history, nor their methods of cure can they be considered as the same disease.

We have run into this digression because we find that one of the diseases, as described in books, may possibly be mistaken for the other. Even Dr. Coates supposes that the disease described by Van Swieten, in his article *gangrene*, is plainly the canker of the mouth. We thank the doctor for directing our attention to this book: it has lain upon our shelves for fifteen years without our having even looked into this part of it. We beg leave to dissent, however, from the doctor's opinion, that the commentator describes the canker "in a manner so similar to that in which it now prevails, that no doubt can exist of the identity of the disease." We, on the contrary, fancy that we see the gangrænopsis very plainly delineated: we see a general disease, that is the scurvy, concentrating its malignant influence in the cheek, one of the parts which Dr. Coates considers as peculiarly liable to gangrene. We shall here insert Van Swieten's history of the disease, premising however that the reader ought to bear in mind, that in this case, it is supposed to supervene on scurvy, or at least to occur in scorbutic habits. This will explain the reason of its affecting the mouth more generally than it did in our cases; though let it be observed that the author mentions the cheek first, in his *catalogue raisonné* of the parts affected.

There first arises on the inside of the cheeks, gums, lips, tongue, tonsils, &c. as light redness, not very painful, and a more than ordinary heat; soon afterwards a white spot shows itself in the middle of the red part, which the surgeons are apt to mistake for the first appearance of a suppuration. The

pain then increases and particularly in the place where the white spot is, as also in all the parts around it, which at this time look very red. In the mean while the exulceration sinks deeper, till the whole white spot, which is nothing else than a true gangrenous eschar, falls off, which it will do if the distemper be not severe, and the patient be a person grown up. But, if the case be very malignant, and the person affected very young, the mischief spreads, and the white spot enlarges itself to a considerable extent; at the same time the breath smells very offensively and a large discharge of very fetid saliva is continually distilling from the mouth.

"I have seen very terrible instances of this kind, which I cannot think of without horror, in the children of poor people, where the case has either been neglected in the beginning, or ill treated. For the gangrene of the gums has not only spread so far as to destroy the teeth which have already shown themselves, but has also so corrupted the rudiments of the future teeth within the sockets, that the poor wretches have, from their infancy, been obliged to undergo the inconveniences of age, and become toothless. And yet this is but a slight part of their sufferings; for I have seen where the gums have been so corrupted that almost the whole bone of the lower jaw has been cast off, the tongue eroded, the lips, cheek, and chin almost entirely eaten away, till death has at last put an end to their misfortunes."*

Now this does not appear to be a disease that begins at the roots of the lower incisors, and in the periosteum of the fangs. The great physician, whom Dr. Coates designates as "the close practical inquirer into nature and the sound medical philosopher," would not have failed to detect incipient cases, and to trace the disease from its origin at the roots of the teeth. But he mentions the cheek *first* among the parts *first* affected; whereas Dr. Coates tells us, that he has never seen a well marked instance of the cheek being affected, by the canker, without previous ulceration at the gums. Van Swieten's disease occurred also in adults. "I was once called in to a corpulent man, in one of the worst kinds of a putrid scurvy, whose lower jaw was almost entirely eaten away with the disease." Now it is hardly probable that a little disease at the roots of the teeth, would have thus destroyed an adult subject: rather let us consider that it was the malignity of the scurvy fastening on the jaw. Again, *in loco cit.* "as this disease frequently arises from the scurvy, it

* Comment. Sect. 432.

is usual to wash, &c." Now this disease of the face is no more a part of the history of scurvy than it is of the remittent fever: in both cases it appears to be a concentration of general disease on parts peculiarly susceptible of mortification. It is true the commentator mentions redness, heat, and pain, none of which occurred in our cases. But let it be observed that the general disease was scurvy, which probably produced all these symptoms, before the gangrene supervened. We are not contending for a precise similarity of symptoms, which always vary under varying circumstances, but merely that the gangrænopsis is the issue of a general disease, and that this was the fact in Van Swieten's cases.* Thus it sometimes results from dysentery. In my second case the patient had intermittent fever and dysentery combined; and there is a young man, one John Davis, lately of this neighbourhood, who has a large scar, occasioned by the destruction of part of the cheek. His jaws are so closely locked that he feeds altogether on fluids, and his articulation is very indistinct. I learned from his parents that he had taken mercury for the dysentery when about eight years old, and that it brought on mortification. All this however was a mere assumption, for upon a closer inquisition, they appeared to know nothing of the matter. He must have taken mercury, but, to use their own language, they could not swear that he took any. He had lost none of his teeth, though the ulcer must have been very extensive, the cicatrix now making part of the lips.

Synopsis of Symptoms.—Whenever then, in the course of our attendance on children debilitated by fevers, we perceive the least swelling of the cheek, it is time to take the alarm. According to our very limited experience a little cineritious spot will be found on the inside of the cheek, even at this early stage. This, as Van Swieten observes, "is nothing else than a true, gangrenous eschar." Now what physician would *a priori* suspect from this, that any serious evil was impending; and this fact we would desire every inexperienced reader to impress on his mind. If the case is not seen till it has made a progress of two or three days, the face will be found pale, the cheek tumefied, hard, and shining, the mouth distorted, the lower eye-lid œdematous, the saliva sometimes profuse, in some cases not at all increased. We have already mentioned that in three cases the odour of the mouth was altogether pe-

* Whether Van Swieten mentions this gangrene when treating of scurvy we cannot ascertain, as our copy of his work does not reach beyond the tenth volume.

culiar. At this time the gums and teeth are, to human eyes, entirely unaffected, but the gangrene will even now be found to have made alarming ravages in the cheek; and spreading sooner or later through continuous parts, the gums are seized, the teeth become loose, and necrosis involves the socket. The further progress of the sphacelation can be more easily conceived than described. There is no general inflammation of the mouth, none very evident even at the margin of the gangrene, the parts seem to pass immediately from life to death. The first spot of gangrene appears cineritious and even whitish, but in the progress of the disease, the dead parts are nearly black. The patient appears to suffer very little, he lies quiet, desires to be left to himself, in fact he appears both in body and mind to have passed into another state of existence.

In one case, which I have already mentioned as having occurred under the care of another physician, the gangrene began in form of a small pimple on the inside of the lower lip, the gums at the same time being not the least affected, though mercury had been given for the express purpose of salivation. This pimple very quickly became gangrenous, the parents refused to have a blister applied; what was done I cannot certainly recollect, but the case ended in death, after several weeks, the face being nearly destroyed. In the other case, which was that of an adult whom they were endeavouring to salivate for remittent fever, the disease began on the inside of the lip, and exhibited a patch of perfect gangrene. They enveloped the lip and chin in an epispastic, which arrested the disease and produced a healthy sloughing; though the patient was gradually sinking under his first disease. We have not forgotten that we told this story some pages back; but it is useful, and worthy of being told again.

Of the Cure.—If in the whole history of medicine there is an appalling and heart-rending spectacle, it is that of a little child, suspended between life and death, with a portion of his face destroyed. Happy, thrice happy the man who shall discover the means of averting this evil! The present writer knows no remedy that he can recommend with confidence; the routine of Burns and Underwood is wholly inadequate; and so will the method of Van Swieten be found in the severest cases.

Blisters.—The utility of this remedy in mortification, led me at once to prescribe it in the cheek disease. The two first cases were cured by the force of nature or of medicine, and I am inclined to believe that the blisters were of essential service. In the two patients that died they did not, as we believe, re-

tard the disease in the least; but whether any mortal means could have stopped the career of these cases we are altogether incredulous. We are sorry to confess that we have not found this remedy as useful in common sphacelation, as we at one time fondly anticipated. The application, in some cases, requires a degree of acumen which few possess; and however salutary it may have proved in the hands of the illustrious American surgeon who first brought it into notice, we fear that in common hands it is frequently of mischievous tendency. It may sometimes turn the wavering balance of nature in favour of a separation; but whenever the sphacelating action is strong in a part, and the general system brought under its influence, we fear that blisters are not unfrequently hurtful. In the cheek disease, however, I cannot but recommend them, though it be rather from analogy than experience. Their use must be confined to the earlier stages, or to those cases in which the gangrene is confined to a small circle, and in which the adjacent parts are possessed of sufficient vitality to rise into life, under their revivifying stimulus. If the first epispastic do good, or, indeed, if it have evidently done no harm, and the gangrene be not too far advanced, we should be decidedly in favour of a second application, even before the first blister might have entirely healed. This method, we presume, would prove more efficacious than that of drawing the part with any dressing more stimulating than common basilicon. We consider it as of primary importance, that the plaster should be as powerful as possible, in order that it might draw quickly, and thus tend to subdue, rather than to irritate, the disease beneath. As slow blisters often feed the flame, we are accustomed to use Dr. Hartshorne's terebinthinate decoction of flies, whenever a rapid effect is particularly desired. It would be well to consider, whether a blister drawn by the nitric acid, or boiling water, would promise to be more efficacious. In fine, whatever produces the greatest discharge, in the shortest time, and with the least irritation, ought to be applied without unnecessarily losing one single moment. In that exfoliation of the alveolar process of which three cases have been mentioned, we do not hesitate to recommend blisters as superior to every other remedy. Here the disease lies deeper, and they act by attracting the malady from bones and periosteum to the flesh and skin of the cheek.

Caustic.—If, in the earliest stage, the mortified part could be fairly circumscribed by the actual cautery, and the periphery deeply burnt, at the same time an epispastic applied, assisted by the decoction of flies, we should certainly leave

the patient with some hope of success. In this case our business would be, to make such a decided impression on the part as would certainly subdue all the previous sphacelating excitement. Of course the physician must not consider, how much he is about to destroy, but rather the dreadful destruction that will follow, if the disease transgress the bounds of his cautery. This would be a hard task to fulfil, and a subject of melancholy reflection were it not to succeed. When there is no debilitating fever present in the system, and general tonics can therefore have their just operation, we presume there is little danger; but should another case come under our care, in which the system is possessed by any debilitating disease that thwarts the operation of tonics, we shall certainly try the cautery, unless, in the mean time, we hear of something more promising.

But this brings to our mind a circumstance of no pleasing recollection. I lanced the gums of a child six months old, that was greatly reduced by the summer complaint; the vessels did not contract, and blood continually passed into the stomach from whence it was discharged by vomiting. After ten or twelve hours the parents became alarmed, and fancied that their child would bleed to death. The patient was sinking with her original disease, and I had now no doubt but that she would die in a short time; but to render the matter more satisfactory to those concerned, I undertook to stop the hemorrhage. Vitriol, white and blue, was utterly useless, and so was plugging the incisions. A hot wire was then applied freely, but the more it was burnt, the more it bleed; there was not vitality enough left to react under the cautery. If then the gangrænopsis should begin in a patient already very greatly reduced, it might become a question, whether the actual cautery would not prove equally useless, however distressing to the patient, his physician, and friends. A resolute mind, however, that is possessed of the people's confidence, will endeavour to do something heroic in such desperate cases: a doubtful remedy is better than none—it may do good, and things standing thus, can hardly do harm. Success would be a source of lasting comfort, and failure would not prove to him any considerable detriment in public estimation.

In the gangrænopsis we cannot but consider the actual as far more promising than any potential cautery. It is supposed by old authors, and indeed by some among the moderns, to afford a more brisk, enlivening, tonic influence to the adjacent parts; and certainly its action can be more accurately limited. Dr. Coates informs us that M. Marjolin, author of the article

gangrēne de la bouche des enfans, in the *Dictionaire de la Médecine*, and therefore no doubt a man of reputation, has cured two cases of that disease, one by the actual cautery, and a second by the caustic potash. The same Marjolin cites three of his countrymen who have cured the said *gangrēne de la bouche* by the actual cautery. The Dr. supposes that this disease was the *canker;* when the hot irons were used it is more than probable it had passed to the cheek or lips.

Cataplasms.—Whether any benefit is to be derived from tonic and stimulating poultices, we are very doubtful. We cannot, however, suspect they would do harm, as they very often do in common gangrene, since there is here no evident inflammation. We cannot think that in the early stage they promise as much as the blister, but after the cheek has become largely corroded and the adjacent parts sink below the epispastic point, we strongly suspect that poultices of bark, wetted with Huxham's tinct., camphorated spirits, or some more enlivening corroborant medicine, might not be employed in vain. We used them in our two fatal cases, but as we expected, without retarding the gangrene. But when matters have come to this pass the physician is fairly at a stand; he does not know whether he can conscientiously endeavour to save life and to rescue from an early grave, an innocent child, to travel the long journey of life, an object of disgust to himself and of heart-rending sympathy to all around him. Expertus loquor, never were my feelings so harassed as with the dread that my two little patients would survive, and it was well for my feelings, that I was incessantly and usefully employed in more manageable cases of those afflicting epidemics. But here another consideration presses on the mind. We know not how great may be the powers of nature even when all would appear to be lost and the patient certainly sinking. If then after abandoning him to his fate, in order that he might hide his horrid deformity in the grave, we should find him revive with a mutilation still greater on account of our benevolent neglect, what would be our feelings? Upon the whole we shall find it most conducive to peace of mind, and most accordant with the principles of our profession, to do every thing in our power, till we find the pulse irrecoverably sinking and the patient in the grasp of death.

Local Stimulants.—We are well convinced that with respect to this class of remedies, we did not use preparations of sufficient power. Underwood recommends that the part be "injected with muriatic acid in chamomile or sage tea." Burns says, that the ulcer is best managed with stimulants,

such as diluted muriatic acid, solutions of nitrate of silver, camphorated sp. of wine, tinct. of opium. But Van Swieten used undiluted muriatic acid in bad cases with great success. He says, "it presently stopped the gangrene and soon after the eschar has separated from the parts in which there was life. Nor have I ever known this application to fail me, except where the gums being entirely putrid, the jaw bone was affected; for then I could not prevent its being carious; but if the soft parts only in the inside of the mouth are the parts that are gangrened, it will certainly cure them."* This is no doubt overwhelming authority and it ought to claim the attention of every reader. We remember that Dr. Rush used to say, Van Swieten ought to be read for the sake of his numerous useful facts.

The means ought to be energetic in proportion to the virulence of the attack; and, therefore, in every case which threatens to advance, we should recommend, after cauterization, a liberal use of the Baron's remedy. The nitrate of mercury we used without any advantage, but it was in a case of uncommon malignancy in which no human means would have been efficacious; and as the medicine according to Mr. Kirkland has done wonders in at least one case of mortification, we should be rather encouraged to use it again. An argument in its favour may be derived from the peculiar operation of citrine ointment, in many inflammatory cutaneous diseases and ulcers.

In the *canker* Dr. Coates has found a strong solution of the blue vitriol, 30 grs. to the ounce of water, to prove far more efficacious than any other medicine that was tried in the Children's Asylum. We have already mentioned that in the same disease we have found white vitriol, pulverized with an equal portion of sugar, to afford, after extracting the teeth, the most distinguished relief. If any cases of the gangrænopsis should appear rather ulcerous than sphacelating, these remedies would no doubt prove beneficial.

Mr. Kinder Wood, in the disease of the genital organs, used lead water and poultices wetted with the same; but he found this medicine utterly useless where the disease was far advanced. This does not surprise us, for lead is among the last remedies we should think of using in a malignant ulcer, attended with general debility. Had he used some tonic applications he might not have been called too late in ten cases out of the twelve, to which his experience was limited. It is true he tells us that one case, in which sti-

* Comment. Sect. 432.

mulants had been used ran into mortification; but what these stimulants were he does not inform us, and therefore we shall take the liberty of inferring, that they were not of the tonic kind.

Ablutions.—The mouth ought to be well cleansed many times in the twenty-four hours; and if the little sufferer is not able or willing to do it himself, the parts may be injected with a syringe. We have used strong alum-water, diluted muriatic acid, Huxham's tinct. We presume they were of little use except in washing away the putrid matter. The mouth ought to be held downward in order that the noxious fluid may pass out freely, lest a convulsive deglutition should convey some portion of it into the stomach.

Constitutional Treatment.—It is evident that much poisonous matter must be continually passing into the stomach, that its primary operation on this organ must be very deleterious, and that its long course through the bowels, cannot be altogether innoxious. To correct this evil, I gave large doses of calcined charcoal to Troxell's child, a scruple of the powder frequently in the twenty-four hours. With respect to the use of general tonics, we are not aware of any peculiarities that obtain in this disease: the physician must be quieted by those general principles which he may have derived from reading and practice.

If the original disease be already subdued or have assumed the intermittent form, his way will be plain and he cannot, under such circumstances, fail to remedy a common case, without any severe measures, or uncommon skill. But if the gangrene and the debilitation of the fever are going together, let him remember our two fatal cases. Let him be assured that he is about to contend with an enemy of no ordinary virulence, one which may for a long time haunt his most occupied moments, and which may entail upon his patient during a long life, a digusting deformity, which even himself would be glad to bury in the grave.

We have now very freely communicated all that we have seen, read, or thought on the subject; and we have done so rather with the hope of exciting the attention of others than of doing any direct good by the present essay.

On perusing the foregoing essay and comparing the description of this formidable disease with our reminiscences we were forcibly struck with the graphic accuracy displayed by the author; and in confirmation of his views we shall state the results of our own experience.

In the summer of 1824, while engaged in practice with our esteemed friend Dr. Spencer of N. J. we encountered several cases of this affection, which invariably occurred as the sequelæ of intermittents and other febrile diseases.

From similar pathological views to those of Dr. J we were induced to rely principally on epispasties, a wash of acet. z nci, together with tonics; and speedy recovery was the uniform result. Though mercurial cathartics had in every case preceded the affection of the cheek, we are doubtful of their having had any agency in its production, as the gums were not affected in the slightest degree.

C. B. M.

REVIEWS.

Quidquid venerit obviam, loquamur
Morosa sine cogitatione.—*Martial.*

ART. IV.—*The Lectures of* Sir Astley Cooper, Bart. F. R. S. Surgeon to the King, &c. &c., *on the Principles and Practice of Surgery, with additional Notes and Cases.* By FREDERICK TYRREL, Esq., Surgeon to St. Thomas' Hospital, &c.

(Continued from page 360, No. 36.)

WE again resume the pleasing task of laying before our readers a continuation of the review of the highly interesting and practical work whose title is prefixed. As yet, only two volumes have appeared; we shall in the present article conclude our review of these volumes, and, in accordance with the plan originally proposed, take notice of each as soon as published; at the same time that we are enabled to enrich it as occasions present, with the valuable plates which have appeared in Cooper and Travers's Surgical Essays.

LECT. XXII.—*Urinary Calculi* are found in the kidney, ureter, bladder and urethra; calculi found in the prostate gland, are formed in its ducts, and generally differ from urinary calculi in their composition.

Symptoms of Renal Calculus.—"Pain in the loin, in the situation of the kidney, which pain extends forwards towards the navel, accompanied with a sense of numbness in the bowels, and downwards to the spinous process of the ilium. The pain is of an obtuse kind, it often produces a sympathetic effect on the stomach, and occasions vomiting. The loin is so tender, that the least pressure on it occasions great suffering to the patient. The act of stooping, when a stone exists in the kidney, produces acute pain in the loins, and is sometimes followed by a discharge of bloody urine." Renal cal-

culi are sometimes removed by ulceration, an opening being formed in the loins, from which the calculus is ultimately discharged; if the opening be too small, the aperture should be dilated by sponge-tent; or, the bistoury may be carefully used, "as the artery and vein are before the stone."

The treatment of stone in the kidney "consists in giving the liquor potassæ; the carbonate of potash or soda; not that they dissolve the stone, but they prevent the formation of uric acid; the stone becomes encrusted with triple phosphate, which is a softer substance, and, perhaps, less irritating to the surfaces on which it rests; these medicines also deaden the sensibility of the organ itself. If much pain be felt in the loin, the daily exhibition of a purgative, occasional cupping, or the application of a blister to the loins, will be useful. If there be a suppurative discharge, an issue should be made in the lumbar region."

The presence of a *stone* in *ureter* is shown by pain being felt on pressure, in the direction of the psoas muscle; "the pain extends in the course of the anterior crural nerve, as the stone descends over the lumbar nerves which form it; also to the testicle, as the stone passes the spermatic plexus; and spasmodic contractions of the cremastic muscle occur, as it passes under the spermatic vessels. The patient is sick, often vomits, is covered with cold perspiration, and is unusually pallid." The pain is sometimes excessively severe; remits, but, after a few minutes, returns with equal violence. Some cases are given, in which a stone in the ureter had prevented the escape of the urine and of matter into the bladder, and thus occasioned death. A case is also given in which a calculus was discharged from the ureter by ulceration through the muscles of the abdomen.

Treatment.—During the passage of the stone, the patient should be put in a warm bath, and bled largely, to produce relaxation of the ureter. Opium and the liquor potassæ should be given, to allay irritability; the abdomen should be fomented and gently rubbed from above downwards, in the course of the ureter, in order to assist mechanically the passage of the calculus; and we have seen the most decided beneficial effects from the administration of the ol. tereb. in large doses, which seems to us to allay the pain and irritation attendant on the passage of a stone along the ureter, more effectually than any other article with which we are acquainted.

Stone in the Bladder.—So soon as the stone quits the ureter and enters the bladder, the patient is relieved, and a new

train of symptoms ensue; after detailing these symptoms, the appearances on dissection of those who die with stone, the number, shape, and composition of urinary calculi, our author next proceeds to the

Treatment.—In the language of the text, medicines given with a view to dissolve a stone in the bladder, become so much changed in their passage through the circulating and secreting system, that their chemical influence is, in a great measure, destroyed. "They may alter the surface of a stone, so as to render it soft and less irritating; but they do not prevent a calculous secretion." A case is related, where a large quantity of triple phosphate was secreted; muriatic acid was given, and the secretion was changed to uric acid, in equal abundance; alkalies were then given, and the triple phosphate reappeared.

Alkalies may lessen considerably the irritability of the bladder; the following case is given in Sir Astley's own words, as a striking example of this fact:

"Admiral Douglas was the subject of stone; I sounded him, and in the evening of that day a portion of the stone was discharged by the urethra, and I sent it to my friend Dr. Marcet for analysis, who found it to be oxalate of lime; I therefore gave him acids, but he was not relieved by their use; he then took sub-carbonate of soda ʒss. four times in the day, in some water. Some months afterwards I was requested to meet Dr. Reynolds and Sir E. Home in consultation upon the case of the Duke of Portland; and when I entered the room, Sir Everard said, "Cooper, how did you dissolve the stone in Admiral Douglas?" to which I answered, "I never dissolved a stone in my life."—"But," said Sir Everard, "he expresses himself well from some medicine you ordered him." I called in consequence on the Admiral at his hotel; when he said, "You saw me in dreadful agony, unable to cross a room; but since I have taken the soda, I went from Yarmouth, in Norfolk, to Portsmouth, by land, and bore the journey well; and I could now go down a country dance." Yet the stone still existed in his bladder; but the soda had lessened its sensibility, so as to enable him to bear the complaint without much suffering, and only a little inconvenience from the stone, which still occasionally stopped the flow of urine."

Magnesia has been recommended, but as many stones are magnesian, its use may be improper. The severity of symptoms is considerably relieved by mucilaginous drinks, and injections of opium. After the removal of a stone, a medical

treatment should be adopted to prevent a return of the disease. The uric acid and oxalate of lime calculi, return less frequently than the triple phosphate, which are very often reproduced.

LECT. XXIII. *On the Operation of Lithotomy*—The greater success of one surgeon over another, depends chiefly upon his judgment in deciding upon the propriety of the operation. The following valuable observations of our truly practical author, cannot be too strongly impressed upon the mind. "Before performing the operation for the stone, it is right to inquire carefully if the functions of the body are well performed in other respects: if the digestion be tolerably good, and the breathing and circulation be free. For if the liver be diseased; if the chest be oppressed; or if the heart have an irregular action, the patient does not in general recover from the operation. Pain in the loins, vomiting, or the discharge of matter, indicating disease of the kidneys, also form insuperable objections to the operation."

The age of the patient, provided the constitution be good, does not much influence the result of the operation. Mr. Cline operated successfully upon a patient aged eighty-two. "About sixty years of age is the period at which stone is most frequent in the adult, and then the operation is very successful. In the middle period of life, fever is more violent from the operation, and the patient is often too much loaded with adeps to be submitted to it. Fat persons do not generally bear operations well, they have little vital power; they should be reduced by diet and medicine, and they must be accustomed to irritation of the bladder, by the frequent introduction of the sound; but still they have more fever and disposition to peritoneal inflammation, than at a later period of life."

The most favourable age is from three to twenty; under two years, children "often become convulsed and die from the operation, on account of their excessive irritability." We performed this operation with success on a child aged about one year; not an unpleasant symptom followed. The average number of deaths from the operation, taking all ages, "is one to eight."

It is unnecessary to enter into the details of the mode of performing this operation; it may be well to state Sir Astley's opinion respecting the knife and gorget for opening into the bladder; "in the young the knife answers very well, and also in a thin adult; but in a deep perineum, or enlarged

prostate gland, I prefer the gorget, as being more definitive in its cut."

The difficulties and dangers of the operation for the stone are detailed with considerable minuteness. If a stricture of the urethra exists, the operation should not be performed until a large staff can be introduced. An enlarged prostate gland offers great difficulties to the operator; if the enlargement be lateral, it should be freely divided; "this gland should always be examined per anum in aged persons, to prevent the surgeon being baffled by this disease, and if he finds it enlarged laterally, he must use a large gorget, or else divide freely with the knife." If the third lobe be enlarged, little advantage is gained by the operation, as the patient still experiences nearly all the symptoms of stone; the curved forceps for extracting the stone, are proper to be used in this form of the disease. A portion of the prostate is sometimes nearly detached in extracting the stone, so as to be pendulous in the bladder, and occasion symptoms nearly similar to stone; this happened to Mr. Cline. A difficulty sometimes arises in performing this operation, from a partial contraction of the bladder, in consequence of the sudden escape of the urine, by which the stone has been firmly embraced, so as to impede the use of the forceps. In such a case, the flat forceps answer best, gliding most easily over the stone.

The stone is sometimes so large as to produce great difficulty in the extraction. Sir Astley removed one whole which weighed sixteen ounces. For extracting large calculi, a free incision is required, and forceps large, strong, and so constructed that the blades can be introduced singly, and afterwards joined together. Mr. John Rorer, an ingenious mechanic of this city, has constructed an instrument admirably adapted to breaking down large stones. A number of calculi render the operation more tedious, but not so dangerous as one large stone. Sacculi in the bladder sometimes enclose stones, so that only the end projects into the cavity; a case of this kind is mentioned, where the sac was opened with the knife and the stone easily extracted. The causes of death from the operation, the after treatment, and an account of Mr. Key's operation, which we have already published, follow.

High Operation, or that above the pubes. Having alluded to the unsuccessful attempts which have been made to revive this operation in England and France, our author says, "My opinion is, that it should be confined to a combination of these two circumstances (viz. the large stone and enlarged prostate,) which render the operation in perineo very unsuc-

cessful." The lecture concludes with a detail of cases, where a great number of calculi have been removed from the bladder by means of the urethro-vesical forceps, several of which will be found in the back numbers of the Medical Recorder; some observations on the lithontriptor of Civiale, which he says has not been successful in England, and which he considers only adapted to the case of an adult, having a sound state of urethra and prostate, provided the calculus be also of a moderate size; and some remarks on *calculi* in the *urethra.* These are found in three situations: viz. 1st, in the membranous part of the urethra; 2dly, above the scrotum; 3dly, opposite the frænum. In the first case, "you find the patient having the strongest desire to void his urine; but able only to pass a few drops, with dreadful agony. You introduce a catheter to the membranous part of the urethra, and, feeling a stone grate against its extremity, you should immediately withdraw it, and pass a bougie as large as the passage will admit; when this touches the stone it should be left in, and the patient should be directed to sit in water as hot as he can bear it, and continue it as long as he can: at the same time he should take opium with small doses of tartarized antimony. In half an hour, or an hour, withdraw the bougie, whilst the patient tries to make water, when the stone will frequently follow the bougie, being forced from him by the *vis-a-tergo.* I have found this plan to be the most successful. If the stone permanently lodges in the membranous portion of the urethra, pass a catheter down to it, and introduce a finger into the rectum, to press upon the canal behind the stone, so as to prevent any retrograde movement of it towards the bladder; then make an incision in perineo upon the calculus, and extract it with the common dressing forceps."

If the stone be behind the scrotum, try to press it forwards with the fingers; if this cannot be done it must be pushed back behind the scrotum, and there cut upon, if the use of the large bougie, as in the former case is not successful. The scrotum should not be cut through until all other means have been tried; if it should be necessary, which is doubtful, the incision should be free, so as to allow the ready escape of urine, and prevent its extravasation into the cellular tissue; a catheter should be introduced into the bladder and left there during the time the wound is healing.

If the stone is near the glans, and cannot be pressed through the meatus, an ingenious method is to introduce a common probe, curved at its end, behind the stone, and draw it for-

wards. "It is better to enlarge the meatus with a lancet, rather than risk the laceration of the parts from violence."

LECT. XXIV. *Calculi in the Prostate Gland*, differ generally in their component parts from urinary calculi; they are found in two situations, 1st, several calculi; each seated in a separate small duct; 2d, numerous calculi placed together in a cyst or bag in the substance of the gland. They rarely acquire any considerable size, the largest not being bigger than a pea, and seldom so large; but their numbers are sometimes very considerable. Some cases are related, in two of which operations were performed for their removal, by opening the perineum, cutting into the urethra as in lithotomy, and then making an incision into the prostate. These calculi are composed of phosphate of lime.

Lithotomy in the *female* is much less frequently required than in the male; the sufferings of a female labouring under stone are more severe than in a male, for in addition to the symptoms, there is a "bearing down of the bladder, uterus, and rectum, with a sensation of their being forced through the lower opening of the pelvis."

Several cases are given where women, from perverse and unnatural propensities, have rendered themselves the subjects of lithotomy, by introducing pebbles and other extraneous substances into the meatus urinarius. We have already published a number of cases where large stones were extracted from the female, by previously dilating the meatus. Having detailed the operation of lithotomy in the female, according to the usual method, Sir Astley makes the following observations, "in all cases of this operation which I have performed or witnessed, the urine has not been afterwards retained; but I would not deny that a patient might recover the retentive power." No allusion is made to the simple, ingenious, and well devised operation of Lisfranc of Paris, which seems to us to possess a decided superiority over the old method, and which will undoubtedly obviate the distressing consequences just alluded to. It consists in making a similunar incision with a straight bistoury, commencing on the right side, immediately opposite the meatus urinarius, into which a male catheter is previously so introduced as to draw the canal of the urethra downwards, the incision is continued around and above the meatus, between it and the symphysis pubis, and terminates on the left side opposite the point at which it was commenced; a careful dissection is then made down to the anterior part of the bladder, which is next opened, the forceps introduced, and the stone readily extracted.

Calculi in the Submaxillary Duct, are generally situated in the trunk of the duct, sometimes in its branches within the substance of the gland; our author has seen one as large as an almond deprived of its shell; another, fluted so as to allow the saliva to pass through the depression. They are composed of phosphate of lime. Whilst Mr. Cooper was living with Mr. Cline, "he used frequently to say, 'I have a spasm in my mylo-hyoideus muscle,' and it was usually at the time of eating that he made this observation: at length he said, 'I have discovered the cause of the uneasiness and spasm under my tongue, it arises from a stone in the submaxillary duct,' which he desired me to feel, and which I removed.

"A medical man called upon me and said, 'I have an irritation and swelling under my tongue; I have taken great quantities of blue pill; but as my health is becoming impaired, and the disease continues, I am advised to go to the coast.' On putting my finger under his tongue, I felt a calculus, which I immediately removed, and in a week he was well."

The manner of performing the operation is as follows: "the cheek is drawn back by means of a blunt hook introduced at the angle of the mouth; the duct is pressed upwards by the finger of an assistant, placed under the lower jaw: an incision is then made, with a pointed and curved bistoury, upon the stone from under the tongue, within the mouth, so as to divide the lining membrane of the mouth and open the submaxillary duct; the stone being exposed is to be brought from its situation by means of a small hook which is to be passed under it. If the stone be deep seated in the substance of the gland, a small pair of forceps are required to extract it."

Lect. XXV. *Operations for Retention of Urine.*—Whatever may be the cause of the retention, the bladder must be evacuated, or the patient will inevitably perish from irritation, from inflammation, or gangrene. If a catheter cannot be introduced; if bleeding, warm bath, antimony, and opium do not succeed, an operation must be resorted to, to save the patient. The mode of relief usually resorted to, consists in puncturing the bladder; the different operations for this purpose, are founded upon a knowledge of the manner in which the peritoneum is reflected over the bladder. Three different operations are recommended for this purpose, viz. the puncture above the pubes; by the rectum, and in perineo, all of which are carefully described: inasmuch as the operation by

puncture, *may be occasionally required.*" After describing these operations, Sir Astley next proceeds to point out the practice which he pursues himself in these cases; having premised that from his experience in this disease, nine-tenths of the difficulties in passing the urine arises from strictures in the urethra, or from enlargement of the prostate gland, he next proceeds to describe his mode of relieving retention from diseases of the urethra. He says, "I now never open the bladder. The operation which I prefer is, to open the urethra only, and not to puncture the bladder, which I hold, in the male, to be scarcely ever necessary." Several cases proving the decided superiority of this method, are given, one is a sufficient illustration. "One night, when giving the surgical lecture at St. Thomas's Hospital, a dresser of Mr. Chandler's, then surgeon to the hospital, came into the Theatre, to inform me that a patient was labouring under retention of urine from the use of a caustic bougie; that the man was in great pain, and that a catheter could not be made to pass the stricture. I said, 'I will go with you into the ward after lecture, and do what is necessary.' The pupils accompanied me. Upon examination of the man, I found that the stricture was seated in that portion of the urethra which was covered by the scrotum. I tried to pass different instruments, but could not succeed.

"Reflecting upon the case, it appeared to me to be exposing the patient to unnecessary pain and danger if I punctured his distended bladder; as, when I directed him to make attempts to discharge his urine, the urethra swelled excessively behind the stricture, from the urine passing as far as its seat. I therefore determined to make an incision into the urethra only, which I immediately did, being directed to the place by the distention which an attempt to void the urine produced. The urethra was opened behind the scrotum, and the urine readily discharged. The patient rapidly recovered without any bad symptom."

A female catheter is sometimes introduced into the urethra through the wound, to prevent extravasation, and to permit the urine to pass readily. Any difficulty in the operation will be obviated by passing a catheter or staff to the stricture, and, directed by its point in making the incision, carry it an inch behind, and in a line with the point of such driector. This operation is simple, easy of performance, and almost entirely free from danger.

For *retention* in the *female*, the puncture of the bladder is rarely required; when it becomes necessary, the surgeon can

not hesitate to adopt the operation above the pubes, as preferable to any other. The lecture closes with a description of the operation for *Amputation of the Penis*, which is occasionally required for a cancerous state of the part.

LECT. XXVI. *Fistula in Ano*, is in a few instances a local disease; but more frequently, it is the result of distant visceral complaints, and of a broken down state of the constitution. As the treatment of this disease requires a nice discrimination, we quote at large the valuable practical observations of our author. "When confined to the part, it arises from obstinate costiveness and the efforts to discharge the fæces; and the passage of an indurated stool produces inflammation of the muscles and cellular tissue of the rectum. But the opposite state to the above I have several times known produce it; thus, in a severe diarrhœa, which determining large quantities of blood to the rectum, and being accompanied with tenesmus, is followed by inflammation and suppuration at the extremity of the rectum.

"But the more common cause is disease of the liver, which, preventing the free return of blood from the intestines, leads to inflammation at the anus, and by influencing the secretions for the intestines, occasions a similar effect.

"Diseased states of the lungs are also frequently giving rise to it, from the impediments they produce to the free return of blood, local venous congestion is produced: piles are a common effect, and abscesses at the anus frequently follow.

"Often, therefore, before a person perishes from phthisis, he has a fistula in ano; and this is the reason fistula is considered as a dangerous disease; although in reality it is not so, but it is the consequence of more important diseases, which destroy life.

"The surgeon often brings discredit upon himself by operating in these cases in the last stage of phthisis, when no operation ought to be performed, and when it is impossible the disease can be cured; therefore that death, which is the result of pulmonary disease, is falsely attributed to the fistula in ano.

"The medical treatment of this disease consists in restoring the secretions of the liver and intestinal tube, by submurias hydrargyri, or pil: hyd: at night, and infus: gentianæ compositum, with soda and rhubarb, twice in the day; and if there be any pulmonary or pectoral disease, its treatment must precede, and its cure be performed, before any active local means of treatment be had recourse to. The strength of the

patient must also be restored before any operation be performed, or the wound will not heal favourably.

"If a patient applies with a tumour near the anus, threatening the production of an abscess, and the general health be tolerably good, its treatment is to be as follows:—apply leeches to the part, and let a lotion of the acetate of lead be constantly kept upon the surface. Give to the patient the confectio sennæ with sulphur, as the most gentle aperient; all drastic medicines exert too much action of the muscles of the rectum, and determine blood to the anus, so as to add to the irritation and increase the disposition to suppuration.

"If the swelling increase and become more painful apply fomentation and poultice to the part. When a fluctuation can be perceived, put a lancet into the swelling, as an early opening prevents a large collection of matter, and I have known the wound immediately close and no fresh accumulation follow." The different varieties and operations for the same follow. Two cases which were cured by injections are given, in the one case port wine and the other oxymurias hyd: lig. calcis gr. j. ad ℥j. were employed. The objection to the seton for fistula is, that "the irritation it produces is liable to occasion other abscesses, whilst healing that for which it is employed."

Piles or *Hæmorrhoids*, are found in two states, viz. 1st, a varicose enlargement of a vein, it may be external or internal; 2d, on an excrescence arising from its adhesion and organization.—*Treatment.* In external piles, open the bowels freely with confectio sennæ and sulphur; leeches and a lotion of acet: plumb:—When inflammation is subdued, and the vein remains hard, puncture it with a lancet. If it suppurate, fomentations and poultices. The treatment of internal piles requires great attention to a number of circumstances. "The medical treatment demands the exhibition of confectio sennæ cum sulphure; the bals: copaibæ is also a good medicine. If there be hepatic congestion, gentle doses of blue pill should be given, to restore the biliary secretions; in general, however, mercury disagrees in piles: Ward's paste, or confectio piperis of the London Pharmacopœia, is an admirable remedy, opening the bowels gently and contracting the dilated vessels; soda and rhubarb I have known useful. If piles arise, as they sometimes do, from diarrhœa, the confectio opiata is the best medicine.

The local treatment, to prevent their increase, is to inject cold water into the rectum twice per diem; a dilute aluminous injection is also useful, combined with decoction of oak bark.

The diet must be attended to; animal food is better than vegetable, as occupying less bulk to afford the same degree of sustenance, and consequently presses less upon the returning blood vessels. Mutton is the best butcher's meat. White fish is easy of digestion. All flatulent food should be avoided. A good deal of exercise should be taken; and I have seen, in the incipient state of this disease, horse exercise of great benefit.

When the piles bleed, the medicine should be infusum rosæ cum magnesiæ sulphate; cold water should be still injected.

If prolapsus be produced, it should be washed with a solution of alum and oak bark, and it should be returned by a piece of linen dipped in oil, or covered by ceratum cetacei.

When the piles are inflamed and a prolapsus is produced, purge the patient once freely; apply leeches; foment and poultice the part, and give opium as soon as the purgative medicine has operated. For two or three days let the bowels be quiet: the leeches, fomentations, and poultices being continued, then purge again; for daily purging adds to the inflammation and irritation." Spontaneous bleedings sometimes relieve them; and they are sometimes punctured with this view. When all the means employed will not prevent their increase; and when they acquire considerable size, so as to produce prolapsus, an operation becomes necessary. Sir Astley states, "that in the early part of his professional career, he was a strong advocate for excision, but as his experience increased, he was induced to change his opinion, and to consider excision as not divested of danger." Three cases are given as proofs of this: one died of inflammation the others from hæmorrhage. The ligature is therefore preferred, although more tedious and painful. A description of the mode of performing the operation by single and double ligature, closes the lecture.

LECT. XXVII. *Polypi of the nose* are of four kinds: 1st, the common pendulous polypus; 2d, the hydatid polypus; 3d, the cancerous; 4th, the fungoid. The first is most common; persons of all ages are subject to it; most frequent between the ages of forty and fifty. A jelly-like appearance is seen on looking into the nose, which recedes when the patient inhales through the nostrils, and reappears upon his exhaling. The growth is from that portion of the schneiderean membrane situated upon the same side with the turbinated bones. Instead of advancing to the nostril, it sometimes recedes into the throat, and appears behind the velum palati, it sometimes acquires considerable magnitude, at others, several polypi grow from a single stalk.

Treatment.—No other mode than an operation will succeed in removing these excrescences; three modes have been proposed—by laceration with forceps; by excision; and by ligature; the two former are described, the operation by ligature "is now very generally abandoned by surgeons." Our author prefers the mode by excision with a pair of scissars probed at their extremities, made straight, with long and slender blades. He mentions a disease in children frequently mistaken for polypus "by men who have not had much experience in surgery. It is an elongation of the pituitary membrane of the nose, from relaxed constitution, and from effusion of serum into the cellular tissue of the part; it is red and very vascular. It appears more upon the extremity of the superior turbinated bone than upon the inferior; but I have seen it upon both. It sometimes becomes chronic. It requires alterative medicine, and the application of a solution of alum, or of sulphate of copper, or nitrate of silver. I have more than once known this disease removed by forceps cruelly and unnecessarily."

Hydatid polypi occur sometimes in the nostrils of young persons; they may be cleared away with instruments, but are "always regenerated." They are removed in two modes: 1st, by a strong solution of alum introduced on lint, and constantly worn; 2d, By the daily application of the muriate of antimony used by dossil of lint through a canula. The first is the preferable mode; they are destroyed more quickly by the mur. antimon. but with more pain.

Cancerous polypus is a disease of age. Medicine and surgery do nothing for this disease; powerful narcotics locally and constitutionally, mitigate the tortures.

Fungoid polypus occurs at all ages. "In general the disease enters the different sinuses, affects the lachrymal sac, and ductus ad nasum; bleeds copiously, but has not the pain accompanying cancerous disease. The patient dies from copious discharge, the frequent hæmorrhages, and at last from nervous irritation."

Two cases of polypus excrescences in the pharynx, which were successfully removed by ligature, are given; also, several cases of polypus of the rectum treated successfully in the same way. The lecture concludes with the modes of treatment, and descriptions of the different operations for removing enlarged tonsils and elongated uvulæ.

Lect. XXVIII.—Is not particularly interesting; it treats of abdominal dropsy and empyema; the different operations for these diseases are minutely described.

Lect. XXIX.—*Hare Lip*. It is a question of some import-

ance at what period of life the operation for the cure of this deformity should be performed. Sir Astley draws the following conclusions from his experience: "That prior to six months there is danger of a want of union, and even of the loss of life; that from six months to two years, during the period of dentition, the operation should not be performed; that, after dentition is completed, there is little risk of failure either as regards the union of the lip, or the life of the child."

An early operation, however, is sometimes beneficial, particularly in cases where a fissure has existed in the upper jaw, the union of the lip has, by its pressure, led to an approximation of the edges of the fissure, so as to be productive of great advantage. In illustration of the danger of the operation during dentition or in infancy, several cases are given where the children thus operated on died in a very few hours. The modes of operating for single and double hare-lip, and for deficiency of the palate are next described.

Cancer labii.—Our author's remarks on this disease, are so valuable that we quote largely. It appears in two different characters in the commencement. "It sometimes assumes the character of a warty excrescene, at others it is an ulcerated fissure in the lip attended with surrounding hardness.

"When it is at first a wart it is covered by an incrustation, upon removing which an elevated and ulcerated surface is exposed with surrounding hardness. A fresh incrustation forms; additional growth takes place in some parts, and ulceration in others, until at length a considerable projection is produced. When the incrustation is now removed, the surface freely bleeds, luxuriant granulations appear in some parts and deep depression in others. It extends more upon the red part of the lip than upon the surrounding skin, though ultimately the latter becomes affected. It is very little tender to the touch, so that the patient handles it with great freedom; but it is occasionally accompained with darting pains.

"When it begins as an ulcerated fissure in the lip the surrounding part is hard, an incrustation is afterwards produced, and ultimately the disease has very much the same appearance as as when it begins as a wart. It gradually ulcerates the skin towards the chin, and although beginning in a small spot at length involves the whole lip.

"The character of the sore is that of a cancerous ulcer, its edges being everted, and its surface hard; a gland under the jaw next becomes affected between the symphysis and angle, and sometimes the glands on both sides: the gland is hard and at first not painful, then the surface assumes a livid ap-

pearance and becomes occasionally acutely painful; at length it ulcerates, discharges a bloody serum, bleeds frequently, the edges of the ulcer are everted, the ulceration becomes extensive, and the surface of the sore very irregular; several other glands in the neck become affected, difficulty of breathing and of deglutition ensue, and the patient falls a victim to the disease after a long period of suffering."

Sir Astley states that he has seen at least two hundred cases of this disease on the upper lip, and only *one case* in the under; it is rare in the female; and is a complaint of age, occurring most frequently from fifty to seventy years.

Treatment—In the early stages, the sore may be destroyed by escharotics, but in the "very earliest stages, it is most prudent and judicious to remove it by the knife." This operation should never be performed if a gland under the jaw be enlarged, "*as the disease is then sure to return.*"

Tic douloureux is considered by our author to be an action under par, rather than an inflammatory action on the nerve, and for the obvious reason, that the remedies found successful in it are those of a tonic kind, as bark, arsenic, steel, &c. Narcotics have only a temporary influence in mitigating the suffering. It appears sometimes to originate in the brain itself as was the case with Dr. Pemberton, in whom a portion of bone was found growing on the brain. An interesting case of this kind is related by Mr. Tyrrel. A gentleman had suffered for several months, from a constant severe pain on the right side of the face, seated principally in the branches of the second and third divisions of the fifth pair of nerves; all the different remedies were employed without much relief; he died extremely emaciated and completely worn out by the almost constant and severe suffering. On examining his head after death, two fungoid tumours were found originating from the dura mater; "one situated on the right side of the sella tursica, and connected with all the branches of the fifth pair of nerves, but particularly the second and third; the other was placed over the cuneiform process of the occipital, was of the size of half a large hen's egg, and was connected with the other tumour by a process of the same fungoid matter, which extended over the extremity of the petrous portion of the right temporal bone. The smaller tumour was about the size of a nut."

The operation of dividing the nerve for this disease ought to be performed rather "at the earnest desire of the patient than by recommendation of the surgeon." Our author says that of the various operations which he has performed for this complaint, he recollects but two cases in which the operation com-

pletely succeeded. The patient is sometimes relieved for a few months, but the disease returns, and even whilst the numbness of the lip consequent upon the operation still remains. The nerves which are commonly divided are the suborbitary, the frontal branches of the ophthalmic, the mental nerve and the portio dura of the seventh pair. The operation is simple and next described.

Aura Epileptica—The only case in which our author had occasion to perform an operation for this disease is related—we select it as interesting. "A man had received a severe blow on the thumb, after which he had the following symptoms, which had lasted for several months: uneasiness in the parts; pain extending up the arm in the course of the radial nerve; also to that side of the neck, accompained, by a rotatory motion of the arm inwards; occasional loss of sense and volition, so as to occasion him to fall, but without any struggle; he remained insensible for a few minutes and then recovered, excepting that the attack left some pain in his head. As the man had recourse ineffectually to a great variety of internal remedies and to electricity, I recommended him to submit to the division of the nerve, and making an incision upon the outer side of the radius, opposite to the insertion of the supinator radii longus, I laid bare the nerve, and putting a director under it, I removed a portion, which measured, after its removal, five eighths of an inch. The man had some slight attacks of the complaint afterwards, but on his return home he entirely recovered.

Lect. XXX.—*On Amputation.*—This lecture concludes the volume, and consists of descriptions of the different amputations; it is unnecessay to follow these details, but we may be permitted in this place again to advert to the method of dressing a stump as advised by Sir Astley Cooper. When we consider that the grand object we have in view in the present improved method of amputating, is to procure union by the first intention; and moreover when we consider that the manner of dressing a stump as generally performed on this side the Atlantic, is calculated to produce a decidedly opposite effect, we will be enabled to appreciate the value of the mode of practice here recommended.

"Having applied a roller, and brought the integments together, I merely put three strips of adhesive plaster over the wound, and two round the stump, to keep the ends of the plaster in their place. It is curious to see the difference between the mode of dressing stumps now, and that adopted a few years ago. The old practice was, after the adhesive plaster

had been applied, to put some lint, then plaster again, after that tow, and lastly, over the whole, a cap of flannel. If a surgeon were to do this now, he would be laughed out of the operating theatre; and very deservedly, because he would prevent the success of the adhesive process by undue heat in the limb.

"All that is necessary to do is, to use three strips of plaster over the wound, and one circular piece; if the weather be hot, to apply spirit of wine and water; and if cool, to keep the limb quiet. The object is, to prevent the inflammation passing beyond the adhesive stage; for then suppuration must be the result.

"The last circumstance necessary to mention is, the impropriety of dressing the stump too early; a surgeon, anxious to see if union has been produced, removes the plasters from the wound in two or three days: he who does this, entirely overlooks the object in view, and must be shocked, when he observes that the early removal of the plasters has destroyed all that nature had done. You ought, in four days after the operation, to remove one strip of plaster, for the purpose of letting out any matter which might have collected. In six or eight days after the operation, it will be proper to dress the stump, and then to reapply a strip of plaster before you remove the whole of the first dressing."

ART. V.—*A Physiological Enquiry respecting the action of Moxa, and its utility in inveterate cases of Sciatica, Lumbago, Paraplegia, Epilepsy, and some other painful Paralytic and spasmodic diseases of the nerves and muscles.* By WILLIAM WALLACE, M. R. I. A., Surgeon to the charitable infirmary of Dublin, &c. &c. Dublin 1827. (Pages 148. with a plate.)

WE shall not notice particularly the introductory observations of Mr. W. as they relate principally to the causes which have impeded the employment of moxa in Great Britain; but shall content ourselves with stating, that he conceives national prejudice, and the misapplication of the remedy, to have had no inconsiderable share in producing this result. In section first, "on the immediate cause of functional disease," we find some pathological views which are rather novel.

Our author objects to the term *functional* disease, being used in contra-distinction to the term *organic* disease. He observes, "A little consideration will prove the incorrectness of such language, and lead to the inevitable conclusion, that all diseases are both *functional* and *organic:* or in other words, that there is no functional disease without organic derangement; nor any organic disease without functional disorder." To elucidate this proposition, he reasons thus; every texture, or organ of a living body, has at least two functions to perform; one of them, "relates to the tissue, or organ considered in itself as a particular entity;" the other, to the part it performs "in the general assemblage of functions" constituting the individual. For example, take any organ whatever; thus, "by the function of nutrition, that peculiar texture of a muscle is preserved, by which it is enabled to contract or perform its share towards the preservation of the body; by the same function the liver is preserved in a suitable state for performing its general function, the separation of bile from the blood. And so of all the other organs."

The first species of function, that of nutrition, is "strikingly analogous in its immediate object, in all organic textures," presenting only slight peculiarities in each. While on the contrary, the second species is very dissimilar in different organs. For example, there is no resemblance between the secretion of bile, the contraction of a muscle, and the perception of a nerve.

That function of an organ or texture, by which it preserves its own structure, may be called the *primary* function of the part, and that "which it performs for the preservation of the general system, its *secondary* function:" the term nutrition is here to be confined to the last act in the series of functions, by which, organic bodies appropriate to themselves those substances, which serve to support and form the organic structure.

As a proof of the connexion which exists between the secondary functions of parts, and their structure, which results from their primary function, Mr. W. observes, "that the kidney cannot, in the natural state of the body, secrete bile, nor the liver urine; bone is unable to exhibit the phenomena of muscular contraction, nor can muscle perform the function of bone." Hence he concludes, "that structure and function are inseparably connected, and that the latter, is related to the former, as an effect is to its cause." The consequence must be, that no modification of function can take place, that is not preceded by a corresponding change of

structure, and vice versa. It is true, that these alterations of structure, are not *on all occasions* discoverable by the senses; but this circumstance presents no obstacle to the foregoing reasoning, as our senses cannot always detect peculiarities of organization, that may nevertheless be logically inferred to exist. We are unable to distinguish any differences of structure, in the ova of oviparous animals; though from their products, we are forced to conclude, that there are essential differences. Thus then it appears, as function results from structure, all functional disease must have its origin in altered structure; and as all structure is the result of nutrition, there can be no change of structure, without a corresponding alteration in this function. It follows, that "all diseases essentially consist, in a morbid state of the function of nutrition," or in other words, "of the primary function of organic parts."

Our author here suddenly encounters an unexpected difficulty, it is this; "since all functions depend on structure, what is the organization upon which the primary function, or the function of nutrition depends?"

To this, he admits, no satisfactory answer can be given; and concludes, that "here our researches must end." And we conceive, having failed to establish this, all his reasoning however ingenious, is inadequate to the establishment of the proposition with which he sets out.

Mr. W. next proceeds to point out the difference which exists between the views of the late Dr. Parry of Bath, and his own.

Those diseases which form the subject of Mr. W's. publication, are referred by Dr. Parry, together with most other diseases, to an undue determination of blood to the organs, which constitute the seat of the deranged functions. Our author "assigns a structural, and consequently a vascular origin, to all diseases." He observes, in opposition to Dr. Parry, "that many of those diseases never exhibit any sign of preternatural accumulation of blood," and makes use of the following reasoning: but, let it be granted for argument's sake, that in all of the diseases in question, there is such an accumulation, with, or without, increase of momentum, are we to consider this accumulation as the cause, or the effect of the disease? If we consider it to be the cause, we are granting a *primitive* activity to the blood, to which it is not entitled; and, although the influence of both the quantity and quality of the fluid in the organs, is of great importance in characterizing the disease, and in affording grounds for certain modifications of treatment, yet we should recollect that its increased quantity is

to be considered as an effect, and not a cause; it being evident, that blood could not accumulate in any organ, "without previous disease of the vital powers of the solids of that organ." Hence, in practice, if we direct our attention to the abstraction of blood, at the expense of neglecting the state of the solids, we shall daily "observe diseases, evidently accompanied by an increased quantity of blood in their seat, proceed from bad to worse, attracting to their foci, as long as life continues, the contents of the vascular system."

Section second, treats "of the mode of action of moxa:" The action of moxa, has generally been compared to that of a blister or issue, and from thence it has been argued that this remedy affords no *peculiar* means of combating disease. It is evident these opinions are erroneous, from the considerations; "that, in the employment of moxa it should ever be a grand object to prevent that state upon which the action of a blister depends, viz., inflammatory action; and that when this state was excited, the remedy was either altogether unsuited to the case, or there was an error in the manner in which it had been employed." Although on some occasions when the moxa is indicated, the formation of a drain may be of service, yet the specific action of this remedy occurs, and is terminated long before a drain is established; consequently the benefit resulting cannot be traced to that source. "It must be admitted, that the state of the capillaries, or of those minute vessels, which form the medium of connexion between the termination of the arterial and origin of the venous system, holds an important rank in the chain of causes which produce structural disease."

The experiments which have been made by Dr. Wilson Philip, and Dr. Hastings, on the capillary circulation, appear to Mr. W. "likely to lead to very important improvements in the application of our topical remedies;" and he considers himself very fortunate to be possessed of their aid, in support of the opinions he has formed concerning the modus operandi of moxa.

He next proceeds to detail these experiments, which he expects will prove satisfactorily, "that caloric possesses the power of exciting the capillary vessels of a part to increased rapidity of circulation; that it causes an increase of their tonicity, with diminution of their caliber, and consequently that moxa, the influence of which depends on the caloric disengaged, must act as a stimulating astringent or local tonic." As these experiments are highly interesting, we shall extract several of them.

"*Experiment* I.—'After having observed the natural state of the circulation,' (in the web of a frog's foot,) 'the foot was immersed in water of 110 Ft. for half a minute. On bringing it again immediately into the field of the microscope, *the motion of the blood in all the vessels appeared quickened, and they were contracted.* After an interval of two minutes, the foot was again immersed in water of the same temperature, and for a similar time. *The result was as before.*

"*Experiment* II.—'The circulation in the web of a frog's foot being first attended to, and the foot then immersed in water heated to 115 Ft. for half a minute, *the motion of the blood was immediately quickened, and the vessels in some degree contracted. The immersion was repeated with the same effect.*

Experiment III.—I passed a hot iron through the web of a frog's foot, by which the skin about the hole was shrivelled, and the vessels obstructed, no fluid of any kind being discharged. *No symptom of inflammation followed,* every part of the web appearing as *pale* as before the experiment.

"*Experiment* IV.—'An inflammation had been excited, I do not know how, in the web of a frog's foot; having applied it to the microscope, I found the *vessels of the part greatly dilated,* and the *motion of the blood extremely languid.* In several places where the inflammation was greatest, it had ceased altogether. . . . . I wetted the inflamed web with distilled spirits, at the same time *throwing on it the concentrated rays of the sun, from the reflector of the microscope.* The blood in all the vessels, except in those of the most inflamed part, began to move *with greater velocity;* and in proportion as this happened, *their diameters were diminished,* their interstices became less opaque, and the *redness of the part was evidently lessened.* After I had despaired of restoring action to the vessels of the most inflamed part, I saw the blood begin to move slowly in a vessel which ran directly through the middle of it. It soon acquired a considerable velocity, and on taking a superficial view of the part, through the microscope, the course of the vessel appeared like a streak of lighter colour through the middle of the inflamed part."

Our author relates two other experiments, the last of which we shall condense. Richard McDonnel, aged 56, was affected with a chronic inflammation of the conjunctiva, accompanied by a *very dilated state of the capillaries of this membrane;* a moxa was applied over the eye, holding it at such a distance as to produce a keen feeling of heat, and gliding it along from one part to another during its combustion. "*A contraction*

of the capillaries of the conjunctiva resulted, which was observable in half an hour after the application of the moxa; but still more obvious on the following morning." Mr. W. brings forward the observations of several highly respectable authorities to support his opinions, they are Pearson, Pouteau, Galen, and Prosper Alpinus. These observations, together with the foregoing experiments, seem to "authorize the conclusion, that the application of a certain degree of caloric to the living body, is followed by *a contraction of the capillaries,* and an *increase in the rapidity of their circulation,*" and this contraction does not result from a mere *physical* action, but proceeds from the influence of heat on the *vital properties* of the vessels.

It may be conceived that this influence is only transient, and not likely to render any permanent assistance in correcting diseased action.

In order to decide the important question, whether the influence of caloric in exciting the actions of the living body persists after the period of its application, the following experiment was made by Mr. W. "I introduced one of my lower limbs into a fumigating apparatus, at the Skin Infirmary: the apparatus having been previously heated to the temperature of 120 Ft. On taking my limb out, after it had been enclosed in the apparatus twenty minutes, its surface was red, covered with moisture, and its temperature four degrees higher than that of the opposite limb. I now went into a cold bath: temperature 56 Ft. Having remained in it for ten minutes, I found the temperature of my lower limbs on coming out of the bath exactly alike, and four degrees lower than they were prior to my introducing my left limb into the fumigating apparatus. I now remained quiet for half an hour, and upon examining the temperature of my lower limbs, I found the limb which had been in the fumigating apparatus had acquired its natural heat, but that the heat of the opposite limb was yet two degrees lower than natural; and it did not recover its full temperature for several hours."

There is another question respecting the application of caloric, "are its effects limited to the point to which it is directly applied, or do they extend more or less beyond this point?"

This is important, for if its influence be limited to the surface of the skin, or part to which it is applied, it can have little or no effect, on deep seated, or extensive disease; on the contrary, if it can be extended to parts so situated, it becomes a most important agent, as it may be said to be the only one

that has this power, and is possessed of the same mode of action.

Perhaps many will not admit that the power caloric possesses of establishing an equilibrium, extends to organic bodies: this however, cannot be denied, when we take into view the power external heat has of dilating the living fluids, so as not only to occasion fulness of the superficial veins: but also, to produce a rupture of the deep seated vessels, resulting in mortal effusions into vital organs; the occasional effects of hot baths.

As caloric acts on the capillaries as a local tonic or stimulating astringent, "the power this class of remedies possesses, of extending their influence by sympathy, from the part to which they have been applied, along continuous surfaces, or similar textures, is well known."

In this way we explain the action of cold, when applied to the skin, in arresting profuse hemorrhages from the mucous surfaces.

So also a number of our tonics (as peruvian bark) produce their effects on the remotest parts of the vascular system, by the impression made on the stomach. But without the aid of analogy, the proof that caloric possesses this power of extending its influence, may be found in the writings of Pouteau and De Haen.

The former records one case, and the latter, two cases of fatal inflammation of the brain, resulting from the incautious application of the actual cautery to the head. Here the injury was propagated by contiguous, which is less favourable for this purpose, than continuous sympathy.

One phenomenon seems to militate against the conclusion, that caloric acts as an astringent or tonic on the capillaries.

It is the effect produced when we approach a fire, causing redness of the skin, and fulness of the superficial veins, which appears at first view to be incompatible with a contracted state of the capillaries. This may however, be easily explained; thus, if the circulation of the capillaries be more rapid than usual, a greater quantity of fluid must pass through them from the arteries into the veins, and as the propelling power of the latter is not increased, nor their coats unusually excited to contraction, as are the capillaries; it is evident an accumulation of fluid must occur in them, which together with the dilation of this fluid from increased temperature sufficiently accounts for this enlarged and turgid state.

To account for the general blush, denoting an increase in the quantity of red globules in the capillaries, we must con-

sider their appearance under the microscope during natural circulation, the remarks of Dr. Hastings are in point. He observes, "with regard to the appearance of the blood in the vessels, (under ordinary circumstances,) it may be remarked, that small globules float in a serous fluid. These globules approach much nearer to each other in the arteries and veins, than the capillaries. The most minute of the last vessels, admit only one globule at a time; *and a considerable space intervenes between them, in which space, serous fluid is alone observed.*" Again "when the light is very bright, the globules appear, (in the capillaries,) *almost pelucid.* It is evident, that a more uniform distribution of the red globules in the three orders of vessels must result from an increased rapidity of circulation, and consequently, an augmentation of the number of globules in the capillaries; producing an increased redness, by causing those to become visible that were before "*almost pelucid:* hence the supposition, (which is opposed to facts and experiment,) that the capillaries are in these cases dilated, is altogether unnecessary.

This subject is happily elucidated by Boyer, in his "Traité des Maladies Chirurgicales."

"In every part, even the whitest, the blood circulates, and its globules preserve the red, which is their radical colour: but, as the blood-vessels of these parts are extremely small, and only receive, (if we may use the expression,) insulated globules, they do not show themselves with their ordinary red colour; in the same manner that a drop of coloured liquid in a transparent capillary tube, or an extremely thin plate of coloured glass appears white. But when several globules are united in a vessel, where, in the natural state, they only pass one after the other; they then display their red colour through the thin transparent parietes of this vessel: as several drops of coloured liquid, united in a transparent tube, appear with the colour that is proper to them."

The foregoing remarks, are only applicable to the immediate effects of heat on the skin; for if it be continued for a considerable time, opposite results are obtained. The excitement, which had been produced at first by heat, causes ultimately an exhaustion of the tonic power of the vessels, and consequent relaxation and dilatation.

There will then be an increased redness from debilitated capillaries. At the conclusion of Dr. Hastings' account of Experiment 1st., above cited, he observes, "after a *third* immersion of the foot in water of the same temperature, and for the same time, the *vessels were dilated*, the blood moved

more slowly, and was much *redder*. To the naked eye, the web seemed inflamed. For the *fourth* time the web was put in water of the same temperature for one minute. The arteries, veins, and capillaries, became *greatly dilated*, and *the motion of the blood ceased* except in one artery."

Sœmmerring observes, that the functions of the absorbents are impeded more or less, in the state of inflammation. From Magendie's experiments "it might be conceived, that the distended state of the capillaries in inflammation, would account for the deficient action of the absorbent vessels in that state." Whatever, therefore, will increase the action of the capillaries, will also increase the action of the absorbents. Caloric has this effect, and we might assert *a priori*, that it would be a means of exciting languid absorption.

Or, if the lymphatics can be directly influenced, when in a state of atony, by stimulants, it is probable those stimulants that act on the capillaries, will also act on the absorbents. Whatever solution is attempted, the fact is certain from the following experiment.

A child had been some time in the Charitable Infirmary, on account of an extensive burn. The granulations of the ulcers which resulted, were latterly very large, soft, pale, much disposed to bleed; and could not be kept down by the ordinary means. Moxa was burned over an ulcer on the breast, in the state described, at such a distance as to excite the feeling of pain, without producing disorganization; next morning the effect was very remarkable. "The granulations of the part, and beyond the part, to which the moxa was applied, were sunk below the level of the surrounding skin." This was repeated on other parts of the ulcer for several days successively, with the same results.

We have dwelt longer on this section, as it appears to us one of the most interesting in the book. It contains sound reasonings, and valuable observations, which we could not be satisfied to pass over in silence; we shall conclude our notice of it, by quoting some of the author's concluding remarks. He observes, "the beneficial influence of moxa in curing or relieving disease must depend on its tonic action over the functions of absorption and capillary circulation, for it has been already shown that the other effects of this remedy are incapable of affording any explanation of its beneficial influence; for, on one hand, when the moxa is properly applied, there is scarcely any inflammation excited; and, on the other hand, its beneficial influence occurs and has terminated long before a discharge is established.

"From all that has been said, it therefore appears, that the action of moxa on deep seated disease, is precisely similar to that which is exerted by some of our most valuable agents on superficial disease; and, therefore, that there can be no difficulty in accounting for its remarkable efficacy and the rapidity with which it accomplishes the relief of some of those affections, to which its therapeutic influence is suited. Moreover, it is evident, as caloric is the only agent which has the power of acting in this way, or at least with the same energy, on deep seated disease, we cannot substitute any other remedy in its place."

"*Section* 3d.—Of the selection and preparation of cases for the application of moxa."

From the nature of the action of heat on organic structure, when used as a curative agent, it follows, moxa should only be employed in those cases where there is a debilitated state of the capillaries and consequent retarded circulation, and diminished absorption; and it must be injurious if applied in cases where there is active inflammation or increased action. Hence it never can be used on the same principle as a blister; heat may be so applied as to excite like blisters, vesication, discharge, and cutaneous inflammation, but it will act as a powerful stimulant on the deep seated parts, "and thereby often cause, in cases to which blisters are peculiarly suited, more injury than it can do good."

This remedy should therefore never be used in cases of increased action, active inflammation, or even sub-acute inflammation. Chronic inflammation is the only kind to which it is applicable. There is, however, great difficulty of distinguishing in some instances the latter from the former. It might therefore be useful to mention in a summary way, the more particular points to which attention should be directed in the treatment of the diseases under consideration.

They are, the date of the disease; the habit and mode of living; state of the general functions; and the character of the pain.

If the patient is young and plethoric, and the disease recent, and his mode of living likely to dispose to general plethora, we have reason to expect active inflammation, especially if general and continued febrile symptoms are present at the same time. Such clearly marked cases seldom occur, and therefore, in those that are less obvious, Mr. W. generally regulates his conduct by the character of the pain. "If this be constant, or if it only slightly remits,—if it be much increased by pressure and aggravated at the moment of exertion," he,

"uniformly acts on the supposition that there is increased action." On the contrary, "if the pain be completely intermittent, and although increased after exercise, if it be less severe, or but little aggravated during the act of exertion, and alleviated or but little increased by pressure," he dispenses with those means calculated to lower action, and enters at once on the application of moxa.

It is a general observation, "that acute, differs from chronic inflammation, in being attended by an increased action of the larger arteries, leading to the parts inflamed; but it would be more correct to say, that the increased action of the larger arteries in acute inflammation is continued, and in chronic inflammation, intermittent," this will on proper examination be found to be the fact. It must be admitted, that at certain periods during the diurnal revolution, an exacerbation of symptoms both general and local occurs in the state of active inflammation; but neither the increased vascular action, nor the attendant constitutional symptoms, completely subside as happens in chronic inflammation. The diminution amounts at most to a very imperfect remission. Whereas, in the state of chronic inflammation the intermission is often so complete that a patient, who is in extreme torture and whose vascular system is excessively excited at one period of the day, is at more or less regular intervals entirely free from distress.

This distinction is of great practical importance and should be particularly remembered by the practitioner.

The explanation of intermittent increased action of the vascular system in the chronic forms of inflammation is this, "it depends on an incapability of the parts to support that permanent increased action, which is necessary to produce a cure," owing to their exhausted state. After a short struggle the motive powers of the weakened vessels are exhausted, and they sink into a state of apparent quietude until they recover tone for a fresh rally. When the state of tone either in the system or part diseased is inadequate to support those actions requisite for the restoration of health and consequently the morbid actions assume the intermittent form; the object we should have in view is the restoration and improvement of general or local tone.

To accomplish this object, our remedies should be essentially stimulant; and great judgment is requisite in their administration to avoid adding to the original disease by over excitement.

Mr. W. remarks, "If these opinions be correct, tonic medicines both local and general will be more suited to the

case according as it shall be more purely intermittent, and this is in fact what we observe in practice." Upon these principles is explained the powerful energy of moxa as a local tonic.

We now come to say a few words on the means proper for reducing action in those cases where it is requisite.

One of the most useful is the warm bath, though it is subject to great abuse. It requires caution in its administration to avoid allowing the temperature to become too high or too low. In either case the result will be contrary to the effect intended. When applied as an antiphlogistic, its temperature should not exceed 97° Ft. nor fall below 80°, the patient should remain in it much longer than common; never less than forty minutes, unless some inconvenience is sustained; great advantage will result from a much longer immersion.

Evaporating lotions are valuable, but it is difficult to obtain their good effects from our inability, heretofore, to keep up an equal and uninterrupted evaporation, and the vicissitudes of temperature thence produced having the effect of exciting action, more injury than benefit results from their application.

To obviate this, our author has contrived a very simple instrument by which the lotion may be applied day and night uninterruptedly, and of any temperature required, without the aid of a *nurse-tender* except to set it in action. It consists of a wine bottle to contain the lotion having a number of skeins of cotton immersed in it, the other extremities of which are made to hang over the part to which the fluid is to be applied serving to conduct the lotion in drops; and by increasing or diminishing the number of skeins we may increase or diminish the number of drops, this bottle is to be placed in a tin case attached to the middle one of three arms which project at right angles from a pillar having a firm base. The lower arm is adapted to receive a lamp for giving the fluid the requisite temperature, and the upper one supports the neck of the bottle, these arms are so constructed as to elongate by means of a telescope joint. (See plate.)

The composition of these lotions varies with the circumstances. If the regulation of temperature be our object, water will answer. If the agency of a stimulant or astringent be necessary, the water should be impregnated with alcohol, vinegar, the preparations of lead, ammonia, &c.

A very interesting case is narrated by Mr. W., where evaporating lotions were of essential service. A man aged seventy-four fell from the rafters of a house, and in addition to other serious injury his left knee sustained great damage, "it

felt as if it were a bag filled with small splinters of bone." Though not wounded externally, the tibia, femur, and patella were shattered into innumerable fragments, and the leg could be moved in all directions, it was proposed to amputate it, but the man refused. The limb was put in an extended position, a few leeches twice applied; the temperature of the limb was prevented from rising above its natural standard, by the assiduous and proper application of lotions. No untoward symptom occurred, and he was discharged five months after, able to walk extremely well with the aid of a stick,—he has since returned to his ordinary labour, employs no stick, and can use the limb nearly as well as the right one.

The local abstraction of blood is another mode of reducing inflammatory action, cupping is preferred; and under this head, Mr. W. takes occasion to recommend, the scarificator employed by Baron Larrey, as superior to that in common use, it is less painful, and renders the operation more successful, it resembles very much a gum lancet, (which will answer the purpose,) the cutting part is narrower, and the edge is semicircular. (See plate.)

"*Section 4th.*—Of the various modes of applying moxa." Different substances have been used to cause moxa-bustion; wool was employed by the Nomades, as well as certain spongy substances growing upon oaks, and springing from the Hazel; the Indian uses the pith of the reed, and flax or hemp previously impregnated with some combustible material—the Armenian, the agaric of the oak. The Thessalian, dried moss; the Chinese, and Japanese, the down of the Artemisia; the Egyptian, Arracanese, and several oriental nations, cotton; the Ostiaks, and Laplanders, the agaric of the birch, and the North American aborigines, cotton and dried wood. "At present, in France, Baron Percy prefers the medulla of the Helianthus Annuus or, sun-flower, and when this cannot be obtained, he recommends cotton impregnated with a saturated solution of the nitrate of potash." Baron Larrey employs a cylinder of carded cotton, surrounded by a capsule of linen, and unimpregnated. The cause of the employment of such a variety of substances is, that in countries where moxa is much employed, its medical efficacy is attributed to some peculiar volatile substance, disengaged during its application. Caloric is, however, the only therapeutic agent evolved, and it is on this, that its efficacy depends. It is necessary to select a substance which burns slowly but steadily. If combustion be too quick the impression will be too transitory, and if too slow the blow-pipe will be requisite, which

complicates the operation. To obviate these difficulties, our author employs either surgeon's lint, or fine linen, immersed in a filtered solution of chlorate of potash, made by dissolving one drachm of the salt, in four ounces of distilled water.

When a small sized moxa is to be used, linen answers best; when a large sized, the lint is preferable. It should be perfectly dry before folding it up, in doing which, a proper degree of firmness should be given to it, which experience will soon teach; when the substance has been rolled up and secured by several stiches of a needle, the end should be cut off with a very sharp knife. The length should be about three-fourths of an inch, and the diameter from one-fourth of an inch to an inch.

The instruments he employs are, "a porte-aiguille," which he has invented, consisting of a hollow octagonal, silver handle, holding a stock of needles of different sizes; from the lower extremity of which two steel blades project for the purpose of grasping the needle, which is made firm, by means of a slide. If it be requisite to use a needle of considerable length, a portion of it passes into the handle through a hole in the lower end. The needle may be disengaged by slipping the slide towards the upper end. The entire length is five inches. A pair of dressing or artery forceps having "a screw at about three-fourths of an inch distance from their point," in order to press the blades tightly together.--A bit of small, flat, silver wire, three inches in length; a piece of card paper; "a blow-pipe; a set of needles; and a small glass tube," these are all that are requisite.

With the silver wire a small hoop is formed to embrace the moxa: the hoop varying in size; according to its dimensions; and the ends of the hoop are grasped by the forceps which are rendered tight, by means of the screw. The hoop should be placed a line distant from that extremity of the moxa, which is applied to the skin, so that the hot wire will not come in contact with the surface.

EXPLANATION OF THE PLATE.

FIG. 1. The Porte-aiguille:—*a*. The handle made of silver, is hollow, and holds a stock of needles of different sizes.—*b*. The porte-aiguille, made of steel. *c*. A needle grasped by the porte-aiguille, and made firm in its situation by the slide, *d*. If it be necessary to use a needle of considerable length, a portion of it is made to pass into the handle *a*, through a hole in that end of it which corresponds to the porte-aiguille; and when we wish to disengage the porte-aiguille from the needle, this is easily done by pulling the slide *d* towards the smaller end of the instrument. The entire is about five inches in length.

FIG. 2. The instrument for the application of evaporating lotions.—*a*. The

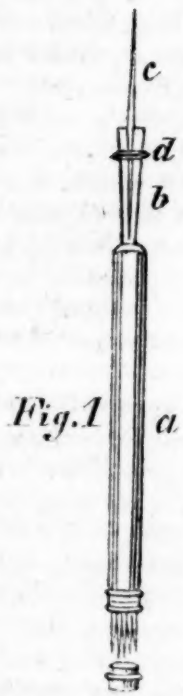
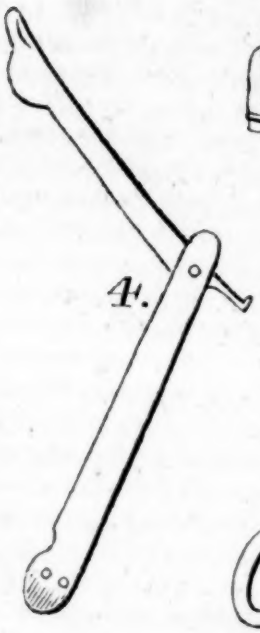
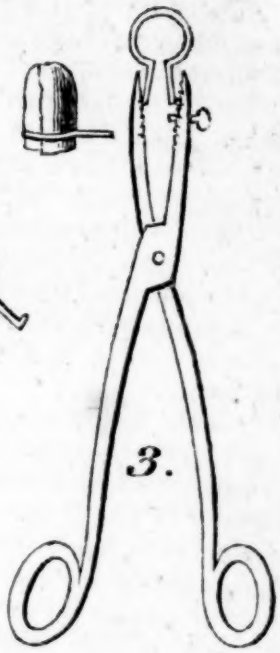
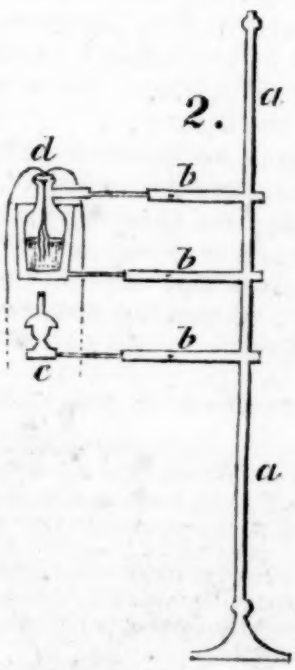
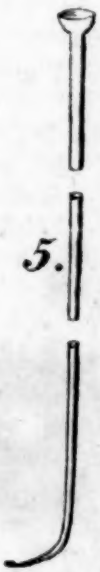


Fig. 1









pillar, of such a height as will enable the branches *b. b. b.* to clear the surface of the bed, in which the patient lies. The branches, by means of a telescope joint, may be made longer or shorter, according to the situation of the part to which the lotion is to be applied. *c.* A lamp which is used, when it is necessary that the fluid should be of a higher temperature than that of the atmosphere. *d.* A case made of tin, sufficiently large to contain a wine bottle, and, at the same time, allow the interposition of a small stratum of water. The bottle is raised from the bottom of the tin vessel by small supports; and its neck is grasped by the upper branch of the pillar. A number of skeins of cotton, immersed in the bottle, and afterwards made to hang over the part, to which the fluid is to be conveyed, serves to conduct the lotion to the part in drops; and by increasing or diminishing the number of the skeins, we may increase or diminish the number of drops.

Fig. 3. The moxa-forceps, with a moxa surrounded by a bit of flat silver wire.

Fig. 4. A scarificator, of the form used by Baron Larrey.

Fig. 5. A blow pipe.

Fig. 6. A glass tube.

In painful affections, the moxa should be applied to the point where the greatest distress is experienced; "and in paralytic affections, it should be first applied over the origin of the nerves, which lead to the diseased parts, and afterwards along the same nerves in different parts of their course." "There is scarcely a part of the body to which it may not be applied in one form or another." Mr. W. has often employed it in cases of obstinate chronic ophthalmia in the form of *objective moxa*, with great advantage.

Our author distinguishes the different modes of using the moxa, whether to cause no injury of texture, or to produce vesication, and escar, either superficial or deep, or lastly, in conjunction with the acupuncture needle "by the terms first, second, third, fourth and fifth, forms of application."

The first form answers when the disease is superficial, and is the objective cautery of the French. It has been extolled by *Faure*, as a powerful remedy in the cure of ulcers, and it may be of service in neuralgia when the nerve is very superficial; or in affections of the joints when the synovial membrane is directly under the skin, as in the knee and wrist. It should be repeated at least once a day, and is applied by holding the moxa as close to the part as the patient can comfortably bear, moving it at the same time slowly backward and forward over the surface until it burns out.

The second form, is less effectual than the third, it may be nevertheless, usefully employed in tic douloureux and where it is desirable to avoid a cicatrix. The moxa is held steadily, and as close as possible to the skin, without allowing them to come in contact, "until the skin appears white," which is owing to "the detachment of the cuticle and the formation of a blister."

In most cases the superficial escar, or third form is the best. To produce this the moxa is placed on the skin, and remains on, "until the skin appears brown," which occurs when the combustion has extended to about a line from the skin.

The deep escar or fourth form will be requisite when the seat of the disease is far removed from the surface, as in affections of the hip and spinal marrow. To generate this escar, the moxa must remain on, until its combustion is complete; when the part will be found black, and the surrounding skin slightly red and wrinkled. It will sometimes be useful to increase the intensity of the heat by means of the blowpipe; and when this is done, the moxa should be previously surrounded by a cylinder of card paper, which will direct the current of hot air downwards.

When we employ the preceding methods, it is advisable to mark the spot where we wish to place it, with a circle of ink and when the blowpipe is used, we should cover the surrounding parts with paper previously wet in a solution of alum or common salt, which diminishes its tendency to combustion. On several occasions, as in paralysis and some obstinate forms of sciatica, the frequent repetition of moxa will be required, before we can subdue the disease, which is so far from the surface that to act on it, an escar is requisite.

When the ulcers which result are numerous, they cause great irritation to the patient, and the discharge may be too debilitating for his system. In such cases, the moxa may be employed in connection with acupuncturation constituting the fifth form. The mode used, is to perforate a moxa of the required size by a needle of a suitable length; the needle is then introduced by means of a porte-aiguille as far as the seat of disease, the porte-aiguille is then removed, the needle remaining in the part. The moxa is then kindled, allowed to burn round the needle, to which the heat is imparted and thence transmitted to the seat of disease. When the needle cools it is removed, and scarcely any escar is perceived. This mode is also applicable where the texture of the skin cannot be injured with propriety.

Larrey recommends immediately after applying the moxa, that we should wet the skin with aq. ammonia to prevent the occurrence of inflammation. Any other stimulant will answer, as alcohol, ether, turpentine, &c. or even bruised garlic; a dropping tube is the best instrument for applying them.

The part should be dressed with adhesive plaster.

We come now to the fifth section "of the means which may be employed as adjuvants to moxa."

These are treated of under the heads of general and local tonic remedies, counter-irritants, pressure, friction, and percussion or shampooing; we shall content ourselves with barely enumerating them, as their utility in a variety of affections and their mode of application is already well known.

The section concludes with a few brief observations on preventive measures.

The sixth and last section comprises an account of thirty "cases of painful, paralytic and spasmodic diseases of the nerves and muscles, to illustrate the utility of moxa;" we shall content ourselves with selecting several of the most remarkable.

Case of Sciatica.—"Thomas Darcy, aged sixty, residing in a cellar in Strand Street, a labourer in the employment of Mr. W. Dobbin, builder.

"Complains of pain, extremely severe, in the region of the right trochanter; shooting, on one hand, into the lower part of the abdomen, a little way above the middle of the left groin, and, on the other hand, down the thigh to the middle of the leg; numbness of the thigh and leg. The pain is not constant; yet there is not any fixed period at which it is more or less painful: it is, in general, as severe during the day as during the night. If he be at work when seized by it, he becomes extremely lame, is obliged to sit down, and a cold moisture quickly covers his skin. When he rests after work, his limb is most painfully stiff.

"He dates the origin of these complaints six years back: they have, however, latterly become more severe. To use his own language, he has tried 'every cure that ever was heard of.'

"Discharged cured on the twentieth September. The moxa was applied in this case three times; viz. on the twenty-third and thirtieth of August, to the back of the thigh, and behind the trochanter; and on the tenth of September to the outer part of his leg."

Case of Myalgia, from μυὼν muscle, and ἄλγος pain, a disease as distinct from rheumatism as is neuralgia. "Michael Doyle, aged fifty, a labourer in the employment of Mr. Bryan, of Cole's-lane market.

"Complains of weakness in the loins, with acute pain on the outer side of the lumbar mass of muscles. He is unable to stoop: the very attempt produces such acute pain, as to cause a spasmodic interruption to his breathing. The pain is more

troublesome by day than by night, but comes on in irregular paroxysms, and is always increased by exercise. He has been labouring under this complaint, more or less, for six years; but, latterly, it has become so severe that he is unable to attend to business. He has used all common remedies. His general health is good.

"The application of a single moxa to the lumbar mass of muscles, and one introduction of a needle, removed all pain, and in one week completely restored the parts affected."

Case of Paralysis.—"Michael Kelly, aged fifty, Thomas's Lane, coachman, formerly in the employment of Mr. Nearney, job-coach proprietor.

"Complains of want of power in the left shoulder and arm, with pain, particularly severe at night. The pain is then so troublesome, that he is obliged to keep the limb raised above the level of his head, to afford himself relief. He can make considerable use of the arm, when acting on any object below him, or while his arm is kept with his hand directed towards the ground. When the pain is severe, it is felt in that part of the arm where the upper third joins the two lower thirds: the limb is wasted.

"A moxa, applied at the insertion of the deltoid, immediately removed all pain, and increased the power of motion. A second applied on the tenth of September, preceded and followed by friction, and the vapour *douche*, restored the limb to health before the month had expired."

Case of Loss of Vision.—"Eliza Reed, aged seventeen, daughter of a silk weaver, Earl Street, Liberty.

"The vision of the left eye is so feeble, that she can merely distinguish light from darkness. Her incapability of seeing objects, appears to her to arise from innumerable black lines in front of her eye. The eye does not differ in appearance from the other eye, except in the vessels of the conjunctiva and sclerotic being dilated, and very serpentine in their course. The pupil dilates and contracts from the influence of light. Her mother says, that the present state of the eye succeeded an inflammation, which had lasted several weeks.

"Four small moxas were applied in the hollow of the left temple: an interval of seven days being allowed between each. The hot bath was frequently used, and while she was in the bath, cold water was pumped with force against the morbid eye and corresponding side of the head. She was discharged cured on the fourteenth of October. The *immediate* influence of both the moxa and the bath was very remarkable. It uniformly happened, even in the early stage

of the treatment, that their application was instantly followed by a great improvement in the power of vision, by the removal of the black lines for a time, which were replaced, so long as they remained away, by a cloud. In the course of the treatment, it was found necessary to remove blood from the head, by cupping in the neck, for the relief of a giddiness which she frequently felt; and which, on one occasion, was so severe as to cause her to fall. it was afterwards relieved by a spontaneous hæmorrhage from the nose, which appeared to hasten the restoration of her sight."

Case of Deafness.—"Barney Coyle, aged fifty-four, a labourer from Dunleary,

"Complains of incessant noise in both ears, particularly in the right. The noise he compares to the hum of a bee-hive. He cannot distinguish any other sound with the right ear, and the hearing of the left is very imperfect. He attributes the complaint to exposure to wet and cold. Has been labouring under it for twelve months, and is progressively getting worse. Has used blisters and a variety of other applications to his ears, without benefit.

Two small moxas applied behind each ear, and the daily use of a hot bath conjoined with the aspersion of cold water on the head while in the bath, removed, in less than a month, the noise from both ears, improved the hearing of the right, and perfectly restored that of the left ear."

Cases are also related to display its efficacy in epilepsy where it proves equally successful.

Some apology seems necessary for having extended this review beyond the limits originally contemplated, but as the subject is an interesting and valuable one, we trust we shall be excused for having entered rather minutely into details. We hope ere long to recieve information of the successful application of moxa on this side of the Atlantic, and we strongly recommend practitioners to make trial of it, not from any experience of our own, but on the authority of Baron Larrey, as well as Mr. Wallace, and others, who have published many interesting instances of its utility in a class of painful and intractable diseases.

ART. VI.—*Rheumatism and some diseases of the heart and other internal organs considered in the Gulstonian lectures, read at the Royal college of physicians, May*, 1826. By FRANCIS HAWKINS, M. D., Fellow of St. John's, Oxford, of the Royal College of Physicians, and one of the physicians to the Middlesex Hospital. London, 1826. (pp. 144.)

THIS publication comprises three lectures. The first commences by considering the term rheumatism, which has not been used with sufficient discrimination, from want of proper attention being paid to the seat of the disorder. Dr. Hawkins considers the common definition of rheumatism as very vague, such for example as "Pain about the joints following the course of the muscles, attacking the larger rather than the smaller joints," which is certainly not pathologically precise.

Dr. H. thinks we shall derive considerable assistance in ascertaining the true seat of rheumatism, from the new views that general anatomy opens to us, as it tends to correct and extend our notions of pathology.

On the threshold of this inquiry the first question that presents itself is, "whether the muscles are themselves affected by it," in common parlance *muscular pain* and *rheumatism* are nearly synonymous, and it is a common expression that rheumatism is the disease of the organs of motion, for it is certain that appendages of muscles—as tendons, fasciæ, ligaments and those structures which belong to the apparatus of the joints, "are at least more frequently affected than the muscles themselves." Dr. Haygarth, states that "out of 170 cases, in 9 only did the muscles appear to be the exclusive seat of the disorder, and in 33 more the muscles were affected in conjunction with the joints." Let us examine the structure of muscles more minutely. The smallest fibres visible to the naked eye, exhibit in all muscles nearly the same form and thickness, they are, when transversely divided, of a prismatic form, pentagonal, or hexagonal, but never cylindric. According to Prochascha, their length is always equal to the whole interval between their two attachments.

Haller and Albinus, however, maintain a different opinion which is not equally well supported. This point is curious

"as it may be thought to illustrate the manner in which the pain of rheumatism radiates along the course of the muscles."

The fibres described above are dividable again and again into others only visible by the aid of the best glasses, and "are finally composed of opaque globules, disposed in a linear order, and united by a transparent gelatinous medium."

Sir Ed. Home and Mr. Bauer, consider these globules as identical with those of the blood deprived of their colouring matter, which has since been corroborated by Prevost, Dumas, and others.

The muscles are enveloped in sheaths of cellular membrane, similar finer sheaths envelop the portions into which some muscles are divided, others invest the bundles of fibres, and others very fine, enclose the finest fibrils.

The fleshy fibres are not continuous with the tendons, as has been erroneously supposed, as they may be separated from them by boiling. And the tendons themselves by maceration may be resolved into cellular texture.

And further, the fibres of the tendinous expansions have frequently a different direction from those of the muscle.

"Is then the proper structure of the muscles to be considered as a primary seat of rheumatism or not?" Many pathologists think not. But the following arguments tend to support the affirmative opinion.

1st. The contractility of muscles is in some cases of acute rheumatism absolutely annihilated, and "in some chronic cases, their functions are impaired so that the muscles become almost paralytic." Hence chronic rheumatism has been correctly stated to be nearly allied to paralysis, a disease which undoubtedly affects the muscular fibres themselves, and in some instances would appear to do this independent of their nerves.

2d. The pain is sometimes felt or appears to be so, in the belly of the muscles; and there is tenderness from pressure over the part. If these resided in the faciæ, they would be more general. And if those pains were propagated along the cellular sheaths of the muscular fibres from the tendons, we should either expect to find pus, or a greater effusion of serum than ever accompanies rheumatism.

3d. There are certain muscles totally devoid of tendinous structure, and yet are involved in general rheumatic pains.

4th. After certain cases of rheumatism, Beclard states, "that a gelatinous fluid has been observed within the cellular sheaths, and surrounding the fibres themselves."

Portal observed the same thing, together with concretions

of different forms and appearances deposited in the interstices between the muscles, between their different portions, and even between their smallest fibres. He has also observed them condensed in substance, and displaced from their natural site.

Lieutaud relates a case of dissection after rheumatism of long standing, in which the muscles were rendered dry and tough, and almost tendinous, and contained certain osseous concretions in various parts of their substance.

From the foregoing arguments, it appears probable, that the muscles are sometimes themselves the seat of rheumatic affections; and it would be singular as is observed by Dr. Carmichael Smyth, (who defines rheumatism to be an inflammation of the muscular fibres,) "if parts so plentifully supplied with nerves and blood vessels, should not be the occasional seat of pain and inflammation."

Our author next proceeds to inquire how far it be strictly true, that the pains of rheumatism shoot along a particular track. "The course of the pain is not often exactly limited, but yet it will sometimes be observed to affect chiefly an individual muscle, as the deltoid or biceps flexor cubiti, especially when that muscle is called into action."

Dr. H. then observes that "whatever doubts may be entertained as to the manner and degree in which the muscles are affected there can be none whatever, that the fibrous and tendinous structures are the chief seat of the disease which we are considering." It is here that it too often establishes itself and exerts its most violent and extensive influence.

Our author next enters into an elaborate examination of the different tissues which may become the seat of the disease. Here we feel no disposition to follow him, but shall conclude this lecture with a condensed view of this part of the subject.

All those parts ordinarily affected by rheumatism, may be referred to two kinds of textures; "they belong either to the great class of fibrous structures, or to that of the synovial membranes." Accordingly, with this division there will be found a corresponding distinction in the symptoms and character of the disease.

Rheumatism of the fibrous membranes may further be subdivided into certain forms, distinguished likewise by the texture which is the seat of the disease. "In the first, it attacks the tendons, fasciæ, and ligaments; and it is in these, if in any cases, that it also attacks the muscular fibres. In the

second it is confined to the periosteum; and in the third it affects the nerves or their fibrous sheaths."

It is the object of the second lecture "to describe the general and diagnostic symptoms of these forms and modifications of rheumatism, and to trace and explain their separate appearances, and also their occasional combinations."

It is observed, that more than common uniformity has obtained in assigning cold as the *exciting* cause of rheumatism; Dr. H. accords with this opinion, and thinks, that when combined with moisture it is most efficient in the production of this disease; how this is supposed to act, he does not inform us, we may therefore be allowed to attempt a solution for ourselves.

When the atmosphere is nearly saturated with moisture, of course its affinity for moisture is proportionably decreased; hence, the insensible perspiration is not carried off with the same celerity that it otherwise would be; this, taken in connection with coldness in the air, has a tendency to check perspiration and to drive the blood upon the internal parts, either resulting in rheumatism, in those predisposed to it, or in some of the visceral affections.

It is in this way we are to explain the circumstance that rheumatics are able to prognosticate the approach of stormy weather. As the increased moisture in the atmosphere excites pains in them long before the meteoric phenomena, and other appearances of the heavens indicate a change.

Cold and moisture do not excite the disease in all subjects, some predisposing cause must previously exert its influence. This involves the question of the proximate cause. It is generally admitted that the acute disease is of an inflammatory nature, but it wants some of the common tendencies of inflammation. such as adhesion, suppuration, or ulceration. It is what Mr. Hunter calls "a specific inflammation;" in what the difference consists Dr. H. does not pretend to comprehend, and we shall not follow him in the succeeding discussion as it leads to no satisfactory result.

The predisposing causes are of a debilitating nature, and there are also many local accidents, as strains, and contusions, which may become predisposing causes; any thing which produces general reduction of the system or local weakness.

The chronic form of the disease is, however, far from being attended with an increased arterial action, there is coldness, relaxation, and weakness; or rigidity and torpor, approaching to that of paralysis.

But similar difficulties attach to other disorders, and to inflammation in general.

"Remote as are the extremes of acute and chronic rheumatism, yet no definite line can be drawn between them. They are shaded into each other through many intermediate degrees and sub-acute forms." It is sometimes the case that a lingering chronic complaint follows an acute attack; but more frequently the chronic form is itself the primary affection. The distinctions between them are, "first, the presence or absence of fever; and next, the degree in which it exists in each instance." The often repeated distinction "that the pain of acute rheumatism is aggravated, but that of chronic rheumatism relieved by warmth," is only true to a certain extent. In cases attended with fever, of course external heat will be prejudicial, and on the contrary will be grateful to the limb which is cold and almost lifeless from deficient circulation; but in other cases the feelings of different patients are variable and uncertain.

Dr. Haygarth contends that chronic rheumatism is never attended with any tumour of the affected parts. This confers no practical benefit, if it is not wholly untenable. As a criterion, it is not to be considered as just. It is inapplicable to all cases where the synovial membranes or bursæ are affected, (as these, whether they are cases of chronic or acute rheumatism, are invariably attended with some degree of swelling.)

The most acute form of this disease, and that to which the name of rheumatic fever is commonly given, is when it attacks the tendons, fasciæ, ligaments, and possibly also the muscles. It commonly begins in the neighbourhood of the larger joints; "not in the joint but near it." We must here, with a view to diagnosis, attend to the situation of the pain, and the form, appearance, and character, of the swelling.

If the wrist be the part affected, all the tendons, more especially those of the extensor muscles, become extremely stiff and painful; "the pain becomes general, in the annular and lateral ligaments and in the numerous bands which connect together the carpal and metacarpal bones;" rendering the whole back of the hand exquisitely painful to the touch. Little or no redness, less than we observe in gout; at first no swelling; after the pain has endured some time, there is a puffiness around the affected parts; apparently caused by fullness of the surrounding vessels. "This extends along the course of the sheaths of the tendons, and for a short distance

up the fore-arm." At first there is no *pitting* upon pressure, but after a while a slight œdema occurs presenting that appearance.

These symptoms do not resemble in the slightest degree the distended state of a synovial membrane; no fluctuation is perceptible; "there is nothing like the tense and elastic tumor which has the form of the synovial membrane, except where it is confined by the surrounding ligaments." In the knee and ancles, where there are greater interstitial spaces for the free expansion of the synovial membrane, this difference is still more striking. The foregoing symptoms afford a convincing proof that this form of disease is seated in the tendinous or ligamentous structures.

In the mean while constitutional symptoms in the form of violent inflammatory fever, attend the onset of a severe attack of the acute form, and it is of importance to observe, that infinitely more constitutional disturbance is excited by genuine fibrous rheumatism (in proportion to the local inflammation) than by the affection of the synovial membranes.

It is principally in the former species that we find the *pulse* described as characteristic of the disease. "Unlike the wiry pulse of serous inflammation, or the fuller but more compressible pulse of the inflammation of mucous membranes; different even from the hard and rapid pulse of phlegmon and of simple inflammatory fever; the pulse in the rheumatic fever is peculiarly round and full and bounding."

The appearance of the tongue in this form is also highly characteristic; its whole surface at first is white and slightly rough; afterwards becoming covered with a smooth, thick, uniform fur, of an intermediate shade, between brown and yellow, not becoming blackened as in the course of continued fever. In acute rheumatism the urine is from the begining high coloured, and deposits a copious sediment, not so red as that which appears in gout, more like the lateritious sediment common in ague. It is in this form only, that those profuse spontaneous perspirations break out, which exhaust the patient without affording relief. Their acid nature is very remarkable; and they exhale a peculiar odour, which indicates the complaint at a considerable distance. This is one proof of a specific constitutional affection. If the patient may be bathed in sweat without relief it is evident that sudorifics are improper until the inflammatory symptoms have abated. The patient should also be allowed to consult his feelings with regard to the temperature of his room and bed.

The chronic form is now less frequently the sequel of the acute than formerly in consequence of the improvements in modern practice, "for no persons are more liable to fall into the chronic complaint, than those who have been greatly weakened by a long continuance of forced and artificial perspirations."

Excessive blood-letting being another error in the treatment of acute rheumatism may likewise protract the disorder, but is still more likely to give rise to metastasis of inflammation to the internal organs.

For the treatment of acute rheumatism opposite plans have been recommended and sanctioned by high authority. Some trusted to the lancet alone: as Sydenham: others have given bark from the commencement in its most violent and inflammatory stage; among whom are Morton, Hulso, Fothergill, and Haygarth. Truth seems to repose mid-way between these extremes. In full and strong habits, and at the outset, if the disease be violent, the propriety of bleeding cannot be doubted; but moderation and caution as to its extent or repetition are requisite. Until, however, the strong arterial excitement is reduced and the heat of the skin allayed sudorifics would be at least useless, and bark positively injurious.

"The important objects appear to be, to diminish fever without too much reducing the patient's strength, and not too long to delay the use of bark." When the tongue becomes moist, though not clean, the pains less severe, the pulse softer and skin relaxed, the aid of the bark will contribute powerfully to render the recovery perfect.

We now turn to those modifications of the disease in which the affection is chiefly confined to other parts of the fibrous system; these only occur in a chronic form or accompanied with only a slight degree of fever.

The first is characterised "by a dull, constant deep seated pain; unattended with redness or evident swelling but greatly increased by pressure against the bone of the affected limb." Occurs most commonly in the fore-arm or leg. Constitution much impaired; small rapid pulse; furred tongue: "after a time the muscles waste, emaciation ensues," and the countenance bears marks of suffering and of great constitutional distress. The periosteum is the seat of this affection, "and a slight degree of thickening of that membrane may sometimes be felt," which has also been discovered to take place on dissection, Allied to this form are the deep seated pains which continue fixed in the shoulder, and sometimes the hip;

any motion of the joint aggravates them, rendering it probable that the fibrous capsules of these joints, which are intimately connected with the periosteum, are the seat of pain.

It is "difficult to distinguish rheumatism of the periosteum from syphilitic and mercurial pains." The previous history is the chief criterion; but rheumatic pains have generally a local situation more decidedly than the other kind, being confined to a single limb, but if they exist in several, it is usually in parts of them alone; on the contrary, pains arising from a specific poison, are more generally dispersed, "seldom confined to a single limb, and scarcely ever to a particular part," unless a node has, or is about to be formed. The nocturnal pains are also more marked in syphilis than in rheumatism.

This affection is of an obstinate and intractable nature; it is very little under the power of local remedies, though the local abstraction of blood is productive of some benefit when the inflammation is unusually acute.

None of the narcotics produce uniform and permanent relief. It has sometimes been cured by slightly mercurializing the system, but more is to be expected from restoring its powers by sarsaparilla, tonic remedies, and attention to regimen.

Another form of the disease is characterized by a sharp and darting pain, following the course of particular nerves. As this affection occurs simultaneously with chronic rheumatism, in similar constitutions, and from the same exciting cause as the other forms, its rheumatic character has never been doubted. A familiar instance occurs in the branches of the sciatic nerve. The pain in sciatica is excited, or aggravated, by motion in which it scarcely differs from neuralgic affections. Its paroxysms are, however, neither so sudden, nor so transient as in true neuralgia. "The symptoms sometimes strongly resemble those of incipient ulceration of the cartilage of the hip joint." Mr. Brodie found several such cases relieved, by the application of blisters, over the situation of the trunk of the sciatic nerve. A method is practised on the continent (of Europe,) which consists in applying "blisters to the outer and lower part of the knee."

Dr. Fothergill's plan of treating sciatica is often resorted to but not always with success. It consisted in administering small doses of calomel every night, increased sometimes until the mouth became slightly tender, with the addition of an anodyne and antimonial draught. Dr. H. has not found the sub. carb. of iron, of any service in the treatment of sciatica, which if well founded confirms the distinction between this affection, and neuralgia.

The term sciatica, has been indiscriminately applied to various forms of disease,—not unfrequently to a synovial affection. Portal "found the tendon of the obturator internus covered with synovial concretions," in a man who had been long afflicted with *sciatica*.

Sciatica and lumbago occur sometimes in conjunction, although the latter is strictly, an affection of the ligaments and faciæ of the spine—these cases furnish examples of the occasional coincidence of different modifications of rheumatism. Their treatment is the same as in other cases of sciatica; in all, blisters are the most efficacious remedy. In obstinate cases the ext. stramonium is productive of signal benefit. Dr. H. observes, "When other narcotics have failed, it has immediately relieved the pain, and sometimes the relief has been even permanent."

The term hemicrania, is sometimes applied to a rheumatic affection of the pericranium, and tendinous expansions of the head. When confined to one side, as it frequently is, these parts are sometimes found thickened in consequence.

But the most appropriate application of the term is to a rheumatic affection of the cutaneous nerves, more strictly confined to one side of the head. Its periodical character is remarkable and there is no remedy more efficient than cinchona. The benefit which results from valerian and other antispasmodics, is thought by Dr. H. to afford additional evidence that the nerves in hemicrania are the seat of disease.

Tooth-ach has been improperly classed as a species of rheumatism. It is mostly the effect of caries, though there can be no doubt that it is sometimes of a rheumatic nature, and it is certain that a paroxysm of tooth-ach often precedes and ushers in an attack of rheumatism. It may either affect the nerve, or periosteum of the roots of the teeth.

We shall now enter on the consideration of rheumatism of the synovial membranes. It may attack any joint, but the knee is its most common seat.

The pain does not continue long before some swelling is perceived, and in most instances slight redness of the skin, similar to that which attends the gout, the diagnosis between which and this disorder is derived principally from the constitutional symptoms. We must attend to the situation, character, and form of the swelling which at first arises from an increase of the synovia; and in superficial joints when both hands are applied, fluctuation is distinctly discernible. "The form of the swelling is not that of the articulating extremities of the bones, but arises from the protrusion of

the distended synovial membrane through the spaces which intervene between the tendons and ligaments by which it is in other parts bound down and restrained."

After a time the synovial membrane becomes thickened and a deposition of coagulable lymph takes place on its internal surface, in consequence of which fluctuation becomes less perceptible. In some cases there is an effusion of serum or lymph into the cellular texture surrounding the joint by which the peculiar form of the synovial membrane is lost or obscured.

The appearances are the same as the foregoing when the bursæ or synovial sheaths of tendons are the seat of disease. The diagnosis is easy when fluctuation can be felt, but in the latter stages when this is not distinct, we may derive assistance from noticing the smaller superficial joints, there will often be at the same time, effusion into them. Synovial rheumatism, is also attended with less fever in proportion to the degree of local inflammation.

Its commencement is often acute and severe, and attended with inflammatory fever, this subsides in a few days, and the disorder assumes a more chronic form, running on for some time with a clean tongue and tranquil pulse. It commonly attacks several joints either at the same time or in quick succession, extending to the neighbouring bursæ, and sheaths of tendons, it is often erratic and returns capriciously to the part originally affected.

This disorder no less than fibrous rheumatism, is prone to relapse, one attack appearing to predispose to another.

In its treatment, topical remedies are more admissible than when the fibrous membranes are affected; and they appear to be more efficient than the constitutional treatment. The most beneficial of the latter remedies is the colchicum in its various modes of preparation. "Calomel, opium, and sarsaparilla, are in this form of disease of inferior value." When the inflammation is acute, local bleeding is of service and if there is much tension of the part, it may be relieved by poultices; "otherwise evaporating lotions are of greater service."

Even in the chronic form the repetition of topical bleeding is at times required—cupping is more effectual than leeches. The most efficient means for the promotion of absorption and relief of chronic pain, is the successive application of blisters at a short distance from the affected joint if superficial, or immediately over it, if deep seated. Stimulating liniments are inferior to blisters, but have some power in removing the

slight remains of swelling; but stiffness unattended by inflammation is best relieved by exercise and friction.

In some cases of long continued and repeated attacks, it has not been found possible to prevent a deposit of earthy matter within the synovial membranes, and sometimes in the cellular membrane around them. It may also be spread over the articular cartilages, by which means, as has occurred in many cases of gout, the cartilages may be absorbed, and their place occupied by these earthy concretions, and anchylosis result.

The synovial membranes are liable to another disorder, which can scarcely be confounded with rheumatism although the external appearances are similar. Without the occurrence of previous pain or inflammation, they are sometimes distended with fluid, which may arise either from diminished absorption, or increased secretion; and bears a resemblance to other cases of encysted dropsy. This state of the joint has passed improperly under the name of *white swelling* a term used with little discrimination. Among Dr. Akenside's cases, described in the 1st volume of the "College Transactions," and in which blisters were highly beneficial, "some appear to have been simply cases of inflammation of the synovial membranes" either from rheumatism or other causes.

The diagnosis between ulceration of the cartilages of the knee joint, and inflammation of the synovial membrane, is thus stated by Mr. Brodie. "The pain in the former, is slight in the beginning and gradually becomes very intense, which is the very reverse of what happens in the latter." The former is unattended by swelling until it has existed for some time.

Our author now recapitulates what has already been given on the subject of the diagnosis, between fibrous and synovial rheumatism, the latter of which is described by some authors under the name of *rheumatic gout*, for the propriety of which term he contends. He then treats of the various combinations of synovial with fibrous rheumatism, and the different forms of the latter with each other; and concludes the lecture with some apposite observations on the value of pathological distinctions. They render our practice less vague and indecisive.

Some advantage has been derived in this way in rheumatism. Thus colchicum has been found to be almost a specific in the cure of the synovial species though it frequently disappoints us in the fibrous kind, the acute form of which, yields more readily to calomel and opium in considerable doses, in-

terposing occasional purgatives, and followed up by mild sudorifics; and finally by cinchona.

Topical remedies, "are chiefly proper for articular rheumatism; but blisters have also a good effect in lumbago, and sciatica, and deep seated pains of the joints." Sarsaparilla, and alteratives are necessary for chronic and cachectic cases, and especially for affections of the periosteum.

The third and last lecture is "on rheumatic affections of the heart, and other internal organs."

"Are they ever of primary occurrence?" after enlarging upon this question, our author leaves it just where he found it; and it is of little practical importance; as it seems now to be generally admitted, that inflammation of a vital organ, from whatever cause it may arise, is to be treated in almost all cases with the same prompt and vigorous means, without reference to the specific nature of the disorder.

Pitcairn in the latter end of the last century, first observed the tendency which rheumatism has to attack the heart and pericardium.

It is a very common cause of enlargement of the heart, though it has not been noticed as such, by Corvisart, or any other systematic writer on this subject. Yet there is no doubt that this disorder has always existed.

Out of 170 cases recorded by Dr. Haygarth, no instance of affection of the heart is noticed. Although in 16 of them, phrenitis was said to be a concomitant. Delirium and the other symptoms of phrenitis may occur, without the brain being in the slightest degree inflamed, our author relates a case of a young man, who had been suffering for some days under a severe attack of acute rheumatism, for which, he had been largely and repeatedly bled. When Dr. H. first saw him, he was in a state of furious delirium; cold applications gave the greatest relief, rendering him quiet and collected; though he relapsed when they were withdrawn. He complained of pain in the head alone, and every thing tended to direct the principle attention to that organ; in a few hours death occurred. On examination, neither inflammation, congestion, effusion, or any morbid appearance was visible within the cranium; but the pericardium was found intensely inflamed; and its internal surface covered to an extraordinary thickness, with coagulable lymph. A similar case is related in a note, which occurred to Dr. Watson in St. Bartholomew's Hospital.

From an examination of recorded cases, it appears that a large proportion of the subjects of this affection, were under

thirty years of age; and in most of them there were marks of acquired or constitutional debility: many were of a delicate slender form, and pale languid appearance. This is a strong confirmation of the observation, that excessive bleeding or other debilitating means, in acute rheumatism, increases the danger of metastasis to the heart and pericardium; and that bark given as soon as it can be safely done, "is of considerable efficacy in counteracting this tendency."

To this principle may be referred, the well established observation, that erratic rheumatism is most liable to be translated to the internal organs; for the debilitating treatment tends to give it this wandering character.

The diffused rheumatism of fibrous structures, is most liable to be translated to the heart and pericardium. It sometimes happens, that cardiac symptoms supervene during the most acute stage of rheumatic fever. The patient is suddenly attacked with violent pain on the left side of the chest, a sense of constriction and suffocation in the præcordia, and indescribable anxiety. The action of the heart is hurried, generally violent: pulse frequent, sometimes irregular: imperfect attacks of syncope follow; and the patient cannot bear the recumbent position. "Pain and inflammation of the limbs are occasionally, but not by any means constantly, relieved by the occurrence of internal inflammation." A severe attack may be speedily followed by death, as in the foregoing instance; but sometimes it admits of mitigation, followed by a more or less perfect recovery: but the patient will always be liable to palpitations, and attacks of pain in the chest, alternately with or accompanying a return of rheumatism, in the limbs.

Such is the acute form of this complaint: "but it happens in a greater number of cases that the palpitations occur more gradually." After a sub-acute form of fibrous rheumatism has continued some time, the extent and sometimes the impulse of the cardiac pulsations become increased: more or less pain in the chest, is from time to time experienced, the articular pains observing the same variations as regards their subsidence or continuance.

In these cases the progress of organic disease is sometimes arrested; and a considerable share of health may be regained; but in a majority of instances, the attacks are renewed at more frequent intervals, and with greater severity. In process of time, there will be œdema of the lower extremities, followed by general anasarca; presenting a pale and bloated appearance; though in affections of the heart, "the counte-

nance is often suffused, or of a violet hue." At length, upon some slight exertion, or motion of the body, the labouring heart appears to stop, and instant death ensues. The post-mortem appearances present the marks of acute or chronic pericarditis, as a redness of the serous lining membrane of the pericardium of variable intensity; a pale yellow or brownish sero-purulent effusion; a thick and concrete albumen "deposited on the whole internal surface of the pericardium." In violent cases this exists without effused serum, and the folds of this membrane are glued together by its means; in time, it becomes a false membrane, uniting the pericardium to the heart, by means of laminæ of different lengths.

In many cases, the muscular substance of the heart is pale and soft, which was formerly thought to indicate inflammation of that organ; but is now more correctly attributed to pericarditis, particularly the chronic kind.

But, *enlargement of the heart* is the most common sequelæ of the transference of rheumatism to that organ. It is sometimes attended with thickening of its parietes, the muscular substance becoming harder than natural, and of a reddish colour; sometimes with a diminished thickness, and a softening of the muscular substance, and the colour either more violent or paler than usual.

With respect to the treatment, there can be no question that acute inflammation of the heart and pericardium, must be subdued by immediate and active depletion, in proportion to the urgency of the case, without reference to the specific, (i. e. rheumatic) nature of the constitutional affection.

The point of difference which may be allowed between the treatment of these cases and common carditis, regards the propriety of exciting inflammation of the joints; but "unfortunately the internal and external affections do not always relieve each other." Sinapisms applied to the joints, have proved beneficial where "a cessation of external inflammation has immediately preceded the internal attack."

In more chronic cases, leeches and vesicatories of various kinds, are requisite to combat the symptoms.

But a seton appears to be the most uniformly efficacious remedy: Our author has tried the ointment of tartarized antimony, and found it not so effectual as the seton.

There are two modes in which rheumatic enlargement of the heart has been sometimes arrested. First, by the use of remedies adapted to rheumatism, as colchicum, calomel and opium. And secondly, by antispasmodics, sedatives, and narcotics; such as conium, digitalis, and lactucarium. The

former is best adapted to those cases which appear most connected with external pains; the latter for those where the cardiac affection is in some measure independent.

There are cases recorded where the palpitation ceased, as soon as the external pains were relieved by colchicum or opium; and others, where they yielded to remedies solely adapted to the affection of the heart.

The latter plan proved successful in the hands of Dr. Pemberton, he introduced a "seton in the region of the heart," and gave "a pill composed of three grains of succus spissatus cicutæ, and half a grain of the powder of digitalis, three times a day;" also "abstinence from all fermented liquors, and a moderate quantity of animal food."

In one case of palpitation, after rheumatism complicated with symptoms of peripneumony, Dr. H. found the hydrocyanic acid of great service, in relieving the cough, allaying the sickness which accompanied it, and diminishing the action of the heart.

It is of importance to distinguish whether the cardiac enlargement be of the active or passive kind; since Corvisart says, "a debilitating plan, forms the basis of the treatment of the first species;—and to cure the second, we must give to the organ, the strength which is naturally wanting, or which it has lost."

The kind of enlargement which has taken place, may in part, be determined by the state of the constitution. A sanguineous temperament, (according to Corvisart,) robust constitution, vigour of life, and a violent disposition, causes active aneurism. And a lymphatic temperament, feeble constitution, and bad state of the humours, and timid disposition, predispose to passive aneurism.

Laennec argues strongly for the method of Valsalva, in the treatment of hypertrophy of the heart. The objection however to it, is, that the patient is liable to become wearied "by the extreme severity of the regimen, and alarmed by the frequency of the bleedings."

Laennec mentions three successful cases treated after this plan. Two of these were young women who presented symptoms of hypertrophy in a high degree. "The privation of one half of their ordinary diet, and some occasional general and local bleedings effected the gradual diminution, and eventually the complete cessation, of all their symptoms."

The third case was also successful, and more conclusive; the patient died of another disease, and the state of the heart discovered on dissection. "It was much smaller than usual,

but presented evident marks of having been shrunk and reduced, from its former size. In Mr. Russel's case, of rheumatism of the heart, (see 10 vol. Edinb. Jour.) the symptoms yielded to frequent venesection and large doses of digitalis.

On the other hand, where enlargement of the heart is attended with loss of muscular substance, an opposite plan should be pursued. Dr. Farriar in some cases of this nature experienced beneficial effects from tonic remedies.

The cases above alluded to, prove the possibility of curing, or at least, relieving the chronic affections of the heart and pericardium. In Laennec's cases, "from one to two years have elapsed, before a cure has taken place; and when this has been effected, the action of the heart and pulse has become natural and regular."

There are cases on record, of the translation of rheumatism to the lungs, these "are rather to be considered as the results of an occasional coincidence, than genuine instances of metastasis of rheumatism."

Much has been said respecting the diagnosis between internal inflammation and rheumatism of the intercostals, called *pleurodyne;* and it has been attempted to describe the exact manner in which respiration is performed in the latter case; of which, the distinguishing characteristic is, that the diaphragm alone effects it, with little or no elevation of the sternum; the external tenderness is also particularly great in pleurodyne. To guard against internal inflammation in such cases, blisters should be instantly applied.

In some instances the diaphragm has been affected with rheumatism: The symptoms are, violent pain in the præcordia, urgent breathlessness and extreme anxiety. It is also, sometimes accompanied by *risus sardonicus*, and difficult deglutition. Portal says, that diaphragmitis is of more frequent occurrence than is generally supposed, and is surprisingly relieved by the application of blisters after sufficient venesection. Dr. Odier of Geneva states, that rheumatism is sometimes translated to the liver.

It is not positively ascertained, that genuine fibrous rheumatism may be translated to the brain or its membranes; though analogy would lead us to expect it; but there are several well attested cases of metastasis to the head, when the synovial membranes were affected previously with rheumatism. The patient in such cases is suddenly seized with an acute pain in the head: after a short time symptoms of effusion manifest themselves, and are speedily followed by death.

The rapid occurrence of serous effusion indicates the seat of this form of disease to be in the arachnoid membrane.

There is a remarkable sympathy existing between the synovial membranes, mucus lining of the urethra, and the mucus covering of the eye; their affections are found to be connected together; existing either alternately or simultaneously. This triple combination was first described by Mr. Brodie. In most of his cases, the first symptom was, a discharge from the urethra, sometimes occasioned by gonorrhœa, but in others not arising from infection. Purulent ophthalmia and inflammation of the synovial membranes followed: sometimes the ophthalmia was the first occurrence. In one of Mr. Brodie's cases, slight muscular pains accompanied the affection of the joints, and a proof of its rheumatic nature may be deduced from its appropriate remedies, for colchicum appears to possess the greatest influence over it of any remedy employed.

Rheumatic ophthalmia occupies a distinct place among the diseases of this organ: sometimes it affects the conjunctiva first, but it extends finally to the sclerotic coat; sometimes the latter, together with the iris are primarily affected; and sometimes it is confined to the sclerotic coat, not extending to the cornea or iris. The two latter forms are chiefly connected with fibrous rheumatism, and the former with the synovial; "it is thus that purulent ophthalmia—an affection of the conjunctiva is the form of disease which takes place in that triple affection of the joints, the eye, and the urethra."

Mr. Wardrop's opinion is, that it is seated in the sclerotic coat, and that it resembles the syphilitic, more than any other kind of ophthalmia. He remarks "that patients affected with rheumatic ophthalmia, as with rheumatism in other parts of the body, cannot bear bleeding to a great extent. This remedy should therefore be employed with moderation. Indeed, the little relief afforded by bleeding in this disease, may be regarded as one of its diagnostic characters." Great benefit is derived from cinchona, in small doses, "which seem to possess as specific an effect in this disease as in ague."

ART. VII.—*A case of Melanosis, with general observations on the pathology of this interesting disease.* By THOMAS FAWDINGTON, Member of the Royal College of Surgeons, London, and one of the surgeons to the Manchester Lying-in Hospital; illustrated by coloured lithographic plates. London, 1826, pp. 49.

THIS little production evinces an accuracy of description highly creditable to its author; conveying correct ideas of the general character of melanosis, and of the extent and variety of structure over which it may be diffused. It may be considered a valuable addition to the history of this obscure and comparatively rare disease, which justly deserves the patient investigation of every pathologist.

The disease is reported to have occurred in a robust healthy man, ætat. thirty, employed as a carder of cotton. In January, 1824, he consulted Mr. Wilson, sen. surgeon to the Manchester Eye Institution, on account of a violent and incessant pain in his left eye. Six months previously he had it injured by the projection of a small piece of iron, but the injury appeared to be slight, as there was little pain and no external wound. About a fortnight afterwards, there was a sensation of fulness in the globe, and upon closing his right eye, found his sight in the left to be impaired. The vessels of the conjunctiva were enlarged, tortuous, and fasiculated; the sclerotica inflamed and undergoing absorption. The iris was dilated and immoveable, and a slate coloured opacity occupied the centre of the pupil. By active depletion, the pain was removed, but no improvement in vision occurred, and at the end of a month he returned into Staffordshire. Near the end of March, the pain again returned and was so excessive as to destroy sleep and induce him once more to apply to Mr. Wilson. The sclerotic coat was much attenuated. The opacity of the pupil had assumed a dirty red colour, resembling newly organized lymph, and seemed like the apex of a conical body, projecting from the bottom of the eye. The former treatment with moderate ptyalism failed, and on the 19th of April, Mr. W. extirpated the contents of the orbit. A section of the eye-ball discovered a black pulpy mass occupying more than half the globe, in the situation of the vitreous humour, no trace of which could be found. Two cells filled with a brownish red fluid were discovered, one at the side of the tumour, the other before it and behind the lens. The tunica choroides was entire and could be easily separated

from the adjacent tunic except at one point, but the sclerotica was much attenuated, and as if divided. By the interposition of the tumour the retina was detached from the choroid, and laid folded across the globe, separating the morbid mass from the larger of the two cavities. The lens was opaque and yellow, its capsule thickened, but partially translucent, the ligamentum ciliare was distinct, and a portion of the processes left; the optic nerve, where it had been divided, appeared sound. He soon recovered from the effects of the operation, and returned home. In August, he again applied to Mr. Wilson, on account of three or four tumours on the face, resembling leaden shot, perfectly black, but free from pain or uneasiness. There was difficult breathing, stitches in the side, and a short cough; his pulse was quick and sharp, attended with emaciation. A tumour like those on his face was observed between the scapulæ, and in a few days several were found on the scalp. He was freely bled and sent to the Manchester Infirmary, where he continued about a fortnight, and by his own request became an out-patient.

His strength having declined rapidly, on the 2d October the case came under the notice of Mr. Fawdington. His general aspect was pallid and emaciated, with œdema of the legs. The abdomen was exceedingly protuberant, and the swelling extended from the right to the left side, downwards to within an inch and a half of the pubes. The tumour was irregular, tuberculated and firm, the prominences slightly elastic. Pressure caused slight uneasiness, yet he complained of transient pains in the chest and belly. A few weeks before, he felt a sharp pain in the left hypochondrium, shooting up to the shoulder, which however spontaneously subsided.

His chief distress appeared to arise from the distention and mechanical influence of the tumour, his respiration was slightly interrupted but was much freer, when leaning forward than in the erect or recumbent posture. The cough was trifling and he expectorated mucus. The appetite was for the most part unimpaired and although harassed by a diarrhœa, the evacuations manifested no deficiency of bile. The urine was scanty, and when voided, had a uniform modena red or purple colour, but soon separated into a chocolate-coloured precipitate, leaving a deep amber coloured fluid above. Neither heat nor nitric acid acted upon it. The pulse was somewhat hurried, tongue morbidly clean and some thirst.

The face and scalp had several well formed melanose tubercles, and one, on the lower lid of the extirpated eye, was about ulcerating, with an entire absence of melanose deposition

in the bottom of the orbit. The cutaneous texture in other parts escaped, but the subcutaneous tissue, over the chest and abdomen was evidently loaded with the melanose deposition, giving rise, when they became superficial, to faint blue elevations of various size and distinctness.

The treatment pursued in the case, was purely palliative, the diarrhœa was restrained by appropriate remedies, yet the constitutional irritation became excessive, and regular hectic was established; the pulse was constantly above 100 and attended with colliquative sweats; the cough became more distressing, and there was difficulty of breathing in the recumbent posture. This state of things continued till the night of 2d November, when the patient suddenly started from his bed, with a sense of suffocation. After gasping with violent effort, he perspired profusely, and fell into a state approaching to syncope. The surface became cold, great uneasiness, with jactitation and delirium ensued, which speedily terminated in death.

Dissection made manifest the general prevalence and extension of this deposit. The cellular and adipose textures of the chest and abdomen were beautifully granulated with melanose matter, variously disposed in masses and enclosed in transparent cysts. After removing several quarts of bloody serum, and some coagula, the liver was exposed to view, which was altered in shape, and augmented to at least four times its usual size. One portion of its surface was undulated, another extremely irregular, from a number of dark blue circumscribed elevations, the largest of which would measure four or five inches over the summit. The intermediate portions were of a reddish brown colour speckled with black. Its substance was remarkably tender and lacerable, and on that surface, corresponding to the seat of Mr. F's observations during life, was found a large tumour projecting above the rest. On dividing one of the principal tubera, several ounces of a homogeneous dark coloured matter escaped, resembling deep chocolate paint. In general their contents were more fluid towards the centre. The gall bladder though buried in morbid structure, contained apparently healthy bile, and its coats were free from morbid deposition. The outward portion of peritoneum, was interspersed with minute dots, elsewhere it was comparatively free from melanosis, though the subjacent cellular tissues were universally pervaded. It should be observed that the black matter chiefly in granular and ovoid forms was abundantly distributed along the spinal column, concave surface of the diaphragm, in the

adipose substance enveloping the kidneys and their vessels, between the folds of mesentery and mesocolon and also in the omentum. The pancreas, spleen and kidneys, were thickly studded with melanose tumours, and also below the serous tunic of the stomach and intestines. No traces of the disease could be discovered in the nerves or large blood vessels. In the chest a considerable quantity of melanose tubercles was found in the cellular texture of the anterior mediastinum, and chiefly on the outer surface of the pleura costalis, and in that of the pleura pulmonalis, where they appeared in the form of flattened spheroids, or ovoids, included in a delicate transparent cyst, and attached by a slender pedicle to the subjacent membrane, in clusters, or distinct and insulated. The substance of the lungs was crepitous and was occupied with a thinly scattered deposition. The lungs were free from morbid adhesions and extravasations. The trachea and its branches were in a healthy condition. Nearly the entire surface of the heart was melanosed, some of it being deposited in its investing membrane, while some was interposed between its fibres. The lining membrane of the auricles and ventricles was sound. Unfortunately an examination of the brain was not permitted.

Mr. Fawdington has supplied us with pretty copious observations on the product of melanosis, which he describes as very similar to the contents of a decayed lycoperdon, or common puff-ball, when moistened with a small quantity of fluid. Its colour was a deep red-brown, or chocolate, slightly fibrous in texture; in its most compact form, it was as tenacious as brain, and when agitated in water or spirit, the former was tinged deeply, the latter slightly, and a pulverulent precipitate formed: No trace of vascularity presented in the cysts; and M. Breschet, with a view to determine the organization of the melanose tubercle, injected the contiguous vessels but found no vascular continuity or any organization in the tubercle.

M. Barruel, from analysis, is induced to consider this product as a deposition of the colouring matter of the blood and fibrine, under a certain modification so as to form three different fatty substances. The first, soluble in alcohol at a moderate temperature, and disposed to crystallize in brilliant scales; the second is soluble in alcohol at a boiling heat only; the third is a fatty substance in a fluid state at the ordinary temperature of the air; of a reddish colour containing a large portion of the phosphates of lime and iron. Dr. Henry

obtained the following results from a portion of softened matter after having been some time in spirit.

"1st. By filtering through paper, much of the colouring matter remained on the paper, and the colour of what passed through was much less intense.

"2d. Boiling does not destroy the colour, nor even when a little caustic potash has been added.

"3d. It is not changed by acids even when heated, except by nitric acid, which deprives it of its black colour, and turns it yellow.

"4th. A stream of chlorine passed through the liquid destroys the black colour, and throws down light fawn-coloured flocculi.

"5th. A few grains of corrosive sublimate stirred up with the fluid, precipitates the whole of the colouring matter, and leaves the supernatent liquid quite clear.

"6th and 7th. Nitrate of mercury, and muriate of tin, produce the same effect but more slowly.

"From these experiments it appears that the black matter is a peculiar secretion, analogous in some properties, especially in the 5th, 6th, and 7th, to the colouring matter of the blood. It would be necessary, however, to repeat and extend the experiments on a larger quantity of the fluid and in a more recent state, before any just conclusion can be deduced respecting its nature.

One peculiarity attending the melanose deposition is deserving of particular notice, as it may hereafter assist in establishing correct views of its nature, causes, and mode of treatment. It is, that in its distribution, the cellular and adipose tissues are preferred to others, for on dissecting, the melanose matter was most abundantly situated in the cellular tissue of the chest and abdomen, on each side of the spine, in the adipose substance enveloping the kidneys, &c. The fine cellular tissue interposed between the serous membranes and contiguous organs, were also observed to be the most frequent seat of melanose deposition, as in the immediate investing membranes of the heart, stomach, and bowels.

It may also be recollected that the parenchymatous viscera as the liver, kidneys, spleen, &c. were loaded with melanotic tubercles.

It would appear also that certain structures as bone, muscular fibre, nerves, arteries, serous, mucous, and cutaneous tissues, and perhaps the brain, enjoy almost an entire immunity from its invasions.

However, it must be conceded, that in its advanced stages

every tissue of the body may be indiscriminately involved in its ravages. Our author states, that by the kindness of Mr. Langstaff he was permitted to examine a preparation, in which the entire contents of the orbit had been converted into a melanose mass, leaving no trace of original structure behind.

Mr. Fawdington observes, that melanosis is often associated with fungus hæmatodes, medullary sarcoma, and according to the observations of Bayle, with the simple scrofulous tubercle. Yet we are unwilling to admit that it possesses any striking analogy with these diseases. The morbid appearances of melanosis may be readily distinguished from the natural *black pulmonary matter*, which is uniformly distributed through the pulmonary tissue, without being encysted, or having its permeability impaired, and is different in colour and chemical composition.

This morbid alteration is not confined to the human subject, as it has been observed in the dog, hog, cat, rabbit, rat, and mouse, and more particularly in the horse with gray hair.

We coincide with Mr. F. that it is highly probable the contents of the melanose tubercle, is the product of secretion; but in what form, or by what means, this process is effected, is at this period impossible to determine.

In concluding our remarks on Mr. Fawdington's case we would take occasion to congratulate him on the manner in which the plates accompanying the work, are engraved. We consider them as perfect specimens of the lithographic art, faithful in delineation, and no less beautiful in execution.

UTILIA FIDELITER EXCERPENDUM.

ANALYSIS

OF

AMERICAN MEDICAL JOURNALS.

ART. I. *The Philadelphia Journal of the Medical and Physical Sciences, for May*, 1827.

BLOODY INFILTRATIONS—The number commences with some observations upon, and cases of bloody infiltrations in the labia pudendi by Dr Dewees. This complaint is generally confined to one labium and is caused by a rupture of one of the vessels in the neighbourhood during, or immediately after delivery, in consequence of which there is sudden and excessive distention of one or both labia. It has been mistaken for the distended and portruding membranes, and for an hernia; but it can readily be distinguished by its position which is lateral, unless both labia are involved, when the natural sulcus will be observed; and by its colour, which is that of extreme lividity, or entirely black. The internal lining of the labium sometimes gives way from excessive distension, and diminishes the anguish of the patient by permitting the escape of blood or coagula; the pain is sometimes so severe as to induce syncope. The tumour sometimes bursts before the child is born, and if this does not occur, as sometimes is the case when it is not of great size, gangrene is sure to take place along the whole extent of the internal face of the labium; which condition was preceded in two cases witnessed by Dr. D. by innumerable vesications containing a yellowish serum spreading themselves over the whole internal face of the tumour. When the slough separates it exposes a large surface of coagulated blood, which soon becomes decomposed, and yields an intolerable stench.

If the parts do not yield, the pain is agonizing and unceasing, high fever and sometimes delirium attend; from the pressure of the tumour on the meatus externus, there is retention of urine, and the pressure of the bed clothes or the lightest applications cannot be borne.

Treatment—When fever attends, blood-letting to reduce arterial action; purges, any of the neutral salts, with the special observance, that the woman be not permitted to rise during their operation, nor when she passes her urine; should the bladder become distended, the enlarged labium may be pressed gently to one side and if this does not succeed, the catheter must be introduced. With a view to give exit to the extravasated blood, Dr. D. insists, as the best mode, that a free incision should be made the whole length of the tumour with a scalpel, or lancet, and in this consists the chief merit of his paper. The practice recommended in the books consists of making small punctures with the point of a lancet, but it will readily be seen that this will not permit the escape of coagulated blood, and we can never expect it to be absorbed. The parts should now be kept clean by frequent washing with soap and water, and the charcoal poultice constantly employed. Dr. D. suggests in order to correct the fetor, the use of pyroligneous acid as a wash, or applied over the poultice.

Before the parts heal, considerable debility will result from the excessive discharge of pus, &c. when the strength must be supported by tonics and generous diet. Three cases are given, two of which go to prove the decided superiority of the mode of practice recommended by Dr. D.

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Cedar apple.—From having seen several communications in the newspapers of the day recommending the cedar apple or knot as a remedy for the expulsion of worms, Dr. Brocchus was induced to present for his inaugural dissertation, an experimental inquiry into its vermifuge powers; several cases are given where it was employed in doses of twenty grains twice or thrice a day; but from the result of his experience Dr. B. does not consider it to possess any superiority, and indeed that it is even inferior in efficacy, to many of the same class of remedies.

The cedar apple is a fungiform product of the red cedar, a species of juniperus. (*Juniperus Virginiana.*) It is found in almost every section of our country; and bears a strong analogy, both in sensible and chemical qualities, to those excrescences produced by the puncture of an insect on the boughs of the different species of oak; it is astringent, and contains a bitter principle, which is supposed to act as a direct poison to the worms.

We pass over the papers from page seventeen, to page seventy-seven, including Pendleton on Monstrosities; the descriptions of the improved eudiometrical apparatus, by the distinguished Professor of Chemistry in the University of Pennsylvania; Griffith on Infanticide; and Jackson on the Laws of Irritation, to matter of a practical nature.

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Test for Opium.—Opium is known to contain an alkali, called morphia, upon which its narcotic properties depend; now this alkali is naturally in union with meconic acid, *which produces a striking red colour, with solutions of red oxyd of iron.* This property has not before been proposed as a means of detecting opium; owing probably to the circumstance, that the meconate of iron does not precipitate. Professor Hare has contrived a method (founded on the property which meconic acid has of precipitating with lead,) by which "a quantity of opium not exceeding that contained in ten drops of laudanum may be detected in a half gallon of water."—thus:

Add a few drops of acetate of lead to an infusion containing any quantity of opium, not less than the proportion mentioned, an observable quantity of meconate of lead falls down. The precipitation, where the quantity is small, may require from 6 to 12 hours, and may be faciliated by gently stirring with a glass rod, to detach the flocks from the sides of the recipient,

which should be of conical shape, to concentrate them in their descent. To the meconate collected at the bottom of the vessel, pour down through a glass tube, about 30 drops of sulphuric acid; follow this by as much of the red sulphate of iron:—"the sulphuric acid liberates the meconic acid, and thus enables it to produce, with the iron, the appropriate colour which demonstrates the presence of that acid, and consequently of opium."

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Denarcotised Laudanum.—We learn from the experience of the French chemists and physicians, that the unpleasant effects of opium reside in a principle called narcotine; and we are informed by Robiquet, that by digestion in ether, it may be deprived of that noxious principle.—From a knowledge of this statement, Dr. Hare was induced to test it, and has now made known the result. A quantity of opium, was subjected four times successively to as much ether, (kept near the temperature of ebullition) of the specific gravity of .735, as would cover it, allowing each portion to act on it for about 24 hours. The opium thus prepared, was now subjected to diluted alcohol, sufficient to convert it into laudanum. In a few days the ether which had been digested on the opium, evaporated spontaneously, leaving much crystalline matter mixed with colouring matter; the former of which is, no doubt, the narcotine of Robiquet. The digestion of the opium with the ether, is conveniently performed in the papins digesters, which can be procured at the hardware stores in this city.

Some cases are detailed, in one of which a refreshing slumber succeeded the use of the *denarcotised laudanum*, in a dose of 10 drops, "which was not followed by any of the distressing sensations to which the patient had always been subjected, after taking common laudanum." A letter is subjoined from Dr. Dewees, detailing his experience with it in four cases; we select the following. It is one, "where severe after-pains following delivery, and in which every other remedy almost, save opium, was tried without success for their relief. In this case, opium in no shape whatever, could be given internally, or even employed externally, without the severest sufferings following.

"The denarcotised laudanum was given with the most entire success, and without the slightest inconvenience following its exhibition. The lady called it, 'the divine tincture of opium.'"

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Experiments on Tendons.—This paper we recognize as the interesting and valuable thesis of Richard Lee Fearn, M. D., of Virginia,* and whilst in this place we award him due meed of praise, for the industry displayed in the prosecution of his researches; the faithfulness of description, and the perspicuity of his style, we cannot withold our regret, that it does not fall to our lot to see such productions, oftener the results of the labours of our industrious students.

In complying with that requisite of universities, the preparation of a thesis previous to graduation, too many of our students write on the most common place subjects, without adding even a single original idea, or suggesting a solitary principle in practice. Now let them banish from their minds, the notion that it is a "mere form," that "nothing new can be added by the young and inexperienced,"—let them look into the many unexplored tracks in our profession,—at the rapid advances daily making, or, let them profit by the example of the author of the paper before us, and we have no doubt that they will do much, by diligent inquiry, careful observation and well conducted experiment, to advance the interests of the profession.

It will be recollected that sometime since we mentioned a case of rupture of the tendo-achilles, successfully treated by Dr. Horner with a seton; this case, although sufficient to attest its efficacy, required further testimony to establish its application to even analogous cases with perfect confidence; with this view Dr. F. made the following experiment on a dog.

* We have corrected a slight mistake, Dr F is not of North Carolina.

July 21*st*, 1826. A small puncture was made through the integuments, and the posterior third of the tendo-achilles divided an inch and a quarter above its insertion. The dog was permitted to run loose, and in a few hours the whole tendon was found completely divided, and the ends loose and separated to a considerable distance.

August 24*th*. No attention was paid to the dog until this day; the inflammation had completely subsided, the ends of the divided tendon were separated some distance. Friction was employed to induce inflammation, and by means of bandage and splint, a proper position of the parts was maintained for 16 days, when, no benefit resulting, the dog was again liberated. *October* 21*st*. No difference in the situation of the parts, a needle armed with a small silk riband was passed between the retracted ends of the tendon, and the animal set at liberty. 23*d*. Considerable inflammation induced by the seton, dressings applied to keep the ends of the tendon as nearly as possible in a proper position, and the dog at rest; suppuration freely established at the end of 12 days, when the seton, bandages, &c. were removed. *November* 21*st*. Cure perfect; the dog uses each leg with equal facility. The tendon uniformly enlarged, from the muscle to the os calcis. The dog was now killed, and on dissection, the tendon which was re-united, was found to extend "uniformly from its origin to its insertion, no enlargements or depressions being perceptible, where the ends of the old tendon were united to the ends of the newly formed substance. The whole cord was rounder, and harder, than its fellow, not so flexible, and not possessing that beautiful pearly lustre so conspicuous in a healthy tendon."

In order to illustrate the condition of parts, at the time the seton was employed, the tendo-achilles of another dog was partially divided; the tendon was then ruptured as in the preceding case. At the end of a month the dog was killed, and dissection presented no traces of inflammation. "The absorbents had rounded the ends of the tendon, which were separated two inches from each other. No evidences were here given of that slow process instituted by nature, of which some authors have spoken." The result of these experiments we consider perfectly conclusive, in support of the utility of the seton.

Some experiments were next instituted, with a view of testing the value of the ancient practice in cases of ruptured tendons, by sewing their ends together. In one instance, the tendon tore itself from the ligature, which remaining in the wound, acted as a seton; in another, by the ligature, the ends of the tendon were retained nearly in contact, and direct union took place. In some instances before dissection, the limb was injected with fine size, in order to display the vascularity of the newly formed parts.

The process by which re-union is produced is worthy of attention. "The sheathe of the tendon and the cellular substance in the vicinity, assume the inflammatory action with much more facility than the tendon itself. They therefore arrive at a height of action, adequate to the effusion of lymph sooner than the extremities of the tendon, and consequently furnish the first bond of union. Into this lymph, vessels shoot from all the adjacent parts capable of affording them, and it soon becomes an organized mass. The ends of the tendon are so slow in developing their vessels, that they are not able to furnish their quota to the coagulated lymph, and are therefore not permitted to connect themselves with the newly-formed substance. The ends of the tendon were found in several of the experiments, loose, changed in colour, and surrounded by a dark sanious fluid, while the newly-formed medium of connection, was attached a short distance from the end to the tendon laterally. If the envelopes of an artery be too much disturbed, and the vasa vasorum injured, the artery dies, to where they are furnished in sufficient quantities for its health; in the same way, if the sheathe of the tendon furnishing the vessels essential to its vitality, be disturbed by rupture or other means it must die. In process of time, these dead ends of the tendon,

sanious blood, &c. are removed by the absorbents, and the whole cord becomes a continuous line, of nearly the same diameter from the muscles to its insertion. The primary inflammation, seldom or never surpasses the adhesive point, unless the neighbouring parts are also much injured. From a want of vascularity in the parts in a natural state, we have here a low grade of inflammation, not to be restrained by purging, rest, low diet, &c. as recommended by most authors, but which requires the opposite course of treatment. May not the tediousness of cure following these accidents be attributed in a great measure to this mistake in practice? When in such cases, full, generous diet, bandages, splints, &c. fail in producing a re-union; then the seton of Dr. Physick, may be restored to, with the utmost confidence."

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Charcoal.—Dr. Stevenson in a paper on the medical properties of the common charcoal, carbo-ligni, states that he has found it particularly useful in chronic cases of intermittent and remittent fever, especially in cases complicated with dysentery and diarrhœa; combined with bark, he has found it an excellent substitute for the alkaline and mercurial preparations. In cases of remittent bilious fever of a typhoid tendency, combined with columbo or cinchona in equal quantities, with the addition of calomel, camphor, (and opium, if required,) he has found it of essential benefit. Qr. which of the remedies here mentioned, were most efficient?

Two cases of hepatitis, combined with pulmonary derangement are given, in which the ordinary remedies were administered without effect. Charcoal (all other remedies being laid aside) in doses of a teaspoon-ful morning and night, in milk, effected speedy relief.

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Amputation.—Our distinguished friend, Professor Mott of New York, relates a case of successful amputation at the hip joint, on a boy aged 10 years; it is interesting from the circumstance of its being the first successful operation of its kind, in this country. Dr. M. prefaces the history of this case with some remarks on the propriety of surgical operations, and concludes thus, "we may be permitted to state our belief that a great number of persons are annually committed to the grave, because proper surgical measures are not enforced, and that they are as often withheld from timidity, prejudice, or ignorance, as from any valid objection," to which, we may be permitted to state our *belief*, that persons have been *committed to the grave* because *improper* surgical measures (surgical operations) were enforced in cases where ignorance *alone* was not a sufficient plea, but where daring arrogance, unfeeling boldness, and a longing after *fame!* have hurried on to the commission of acts which would sully the "*bright escutchion*" of any one guilty of violating that sacred charge, "thou shalt not kill."

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Dislocation.—A case of compound dislocation of the astragalus is related by Dr. Beatty, which was readily reduced. In opposition to the views of Sir Astley Cooper; Dr. B. bled and purged his patient freely during the cure; opium was also used to counteract irritation. To illustrate the different result, from the different mode of practice, a comparative view is taken of his own case, and one related by Mr. Cooper. In the latter the patient was not bled at all, and took but two purges, and was only able to walk on crutches, four months after the accident; in the former the patient was bled to the amount of 219 ounces altogether, was purged often, and in less than six weeks after the accident, walked on crutches, and rode on horse back, "bearing weight enough on his foot, to mount a horse."

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A case of traumatic tetanus successfully treated by tobacco injections, is given by Dr. Skinner of North Carolina.

Dr. Godman in a note of some irregularities of the arterial system, relates two singular deviations. In one, an anomalous branch was given off from the arch of the aorta, between the root of the innominata and right carotid, it ascended almost perpendicularly, and terminated in branches, which ramified on the inferior part of the thyroid gland; in the other, a branch similarly distributed, took its origin from the innominata, near its root.

The following irrelevant remarks occur in this note: "It is a circumstance with which we might be amused, were not the stupidity evinced such as to cause sorrow rather than mirth, to read the critical observations from time to time uttered, by those who tell us how surgeons *ought* to have operated, or *might* have succeeded, in cases where the whole character of the parts was entirely altered and distorted by tumour, aneurism, or other disease. One of these *wise men* will read an account of a great and difficult operation, and afterwards, on the body of an emaciated subject, where there is not even fat in his way, will take up vessels, &c., and then with great gravity state that Dr. ——— might have done in such and such a way; and he would 'recommend,' that instead of 'a large,' a 'small incision' should be made in similar cases, with other impertinences equally absurd and ridiculous."

The *matter* may be good, but we question the propriety of the *manner*.

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Under the head of Intelligence, we find that Professor Mott of New York, has recently performed the operation of passing a ligature around the common iliac artery, for the cure of aneurism. A detail of the first case in which this operation was performed, will be found in our 3d volume, p. 185, in which place, Professor Gibson suggests its application to the cure of aneurism: Professor G. performed it in a case of wound of the vessel.

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Dr. Dewees relates a case of iliac passion, successfully treated by bleeding ad deliquium, croton oil, and injections; the patient passed a ball of the shape and size of a pullet's egg, together with many small stones, of an irregular shape, pretty highly polished, and of a fine brown colour, resembling the seed of the tamarind; but streaked with bright yellow. The large mass consisted of layers, about the thickness of an egg shell.

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Dr. Physick has recently met with an instance of a tumour, resembling a genuine wart, occurring on the adnata; its presence caused considerable uneasiness, and after several applications to it, of the solid nitrate of silver, it was entirely destroyed, and has not returned.

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A case of intermittent, in a child of six weeks, is related by Dr. Dewees; it was cured by arsenic, the following is the prescription employed.

Sol. Mineral. Fowl. ℥i

Aq. Font. ℥xij

Six drops administered every four hours.

When there was any evidence of the chill coming on, three drops of laudanum were ordered to be given.

Art. II. *The North American Medical and Surgical Journal, for April*, 1827.

Yellow Fever.—The number commences with an interesting, paper, by Dr. B. Ticknor, containing an account of the yellow fever, which prevailed at Thompson's island, in 1824. Having delineated the principal features in the medical topography of the island, he then proceeds to a consideration of the remote causes of the endemic: vegeto-animal effluvia, was a principal agent in the production of the disease—intemperance, atmospheric vicissi-

tudes, heat, fatigue, and unwholesome food, were among the causes, "to whose agency the origin and continuation of this fatal malady were principally to be attributed."

The symptoms of the disease are next described; Dr. T. considers it as consisting of four periods or stages, the cold stage, or stage of torpor; the stage of re-action, or excitement; the period of remission; and finally the period succeeding that of remission, and terminating either in death or recovery. The march of the disease was rapid; the sufferings of the patient often very severe; and death generally occurred on the fourth, or fifth day of the disease. Three cases are given where examinations post mortem, were made, the results of which led to the conclusion, that death "was rather the consequence of disorganization of the stomach, than of a general prostration of the vital functions."

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STAPHYLORAPHE.—An interesting case of staphyloraphe, or palate suture, successfully performed by Professor Stevens of New York. The patient had a congenital division of the palate, which extended from the anterior part of the palate bones, directly backwards, in the median line, through the velum and uvula. Three ligatures were applied; the edges of the membrane pared off with a cataract knife; the ligatures then tightened, and the patient placed in bed, with directions not to swallow any thing for four days; at the expiration of which time, the threads were removed, and the part found perfectly united. On the tenth day the voice was materially improved, and Dr. S. believes, that the patient "will ultimately acquire a perfect power of enunciation."

The operation lasted nearly an hour, in order that the patient might recover from the efforts to vomit, in the intervals of introducing the threads, and also for the bleeding to cease.

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The paper on hæmorrhages, by Dr. Condie, is able, and well written; it is not, however, of a sufficiently practical nature for analysis.

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FINLEY, on the EFFECTS OF ATMOSPHERIC AIR, on exposed cavities. Dr. F. does not conceive that the inflammation which generally attends injuries of the serous membranes, and particularly those of the joints, depends on any agency of the air. He believes it to depend "on the nature of the wound, on the state of constitution, or on an imprudent management of the injured part;" from some of these causes then, inflammation comes on in the immediate part injured, and by "continuous sympathy, to which serous tissues, when injured, are particularly liable, it spreads, until the whole surface of the cavity is involved."

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The remarks upon the mischievous effects on society, of SPIRITUOUS LIQUORS, and the means of preventing them, by Samuel Emlen, M. D. reflect honour upon their author, and rank him high as a philanthropist and as a conscientious physician. When we consider the extent to which the degrading vice of intemperance is carried in our country; the evils which follow in its train, immorality, distress, disease, poverty and crime; and the influence it may yet have, on unborn millions, every friend to the well-being of society, must look with interest upon any endeavours that may be made to prevent them. There is perhaps no subject which more powerfully calls for legislative interference,—for the strong arm of the law. The members of our profession see, more than any other class of society, the evils arising from the drinking of distilled spirits; they see thousands sacrificed to it when neither neighbours, nor friends, nor even the deluded victims themselves, suspect it; "they only can unfold to the view of our legislators, and those in authority, the real picture of sorrow and sadness which drunkenness exhibits." Let them be unanimous—let them join hand and heart to wipe away this

foul stain upon the bright escutcheon of our country,—let them work faithfully in the good work, and they will reap a rich harvest of rewards in having discharged their duty to their country, and to their God. "We are under a two-fold obligation to hold up to view, its awfully desolating effects, and assist in its removal; as physicians, bound to watch over the public health; and as good citizens, bound to promote virtue, and discourage vice."

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Artificial Respiration.—Dr. Ogilvie relates a case of recovery from the narcotic effects of opium by means of artificial respiration—thirty drops of laudanum had been administered by mistake to an infant, aged ten days, the usual symtoms produced by narcotic poisons appeared—air was blown into its mouth by a female attendant, and the abdominal muscles, and diaphram pressed upon so as to carry on artificial respiration. By persevering for two or three hours, respiration was completely re-established. Dr. O. was led to this practice from having noticed a report of a similar case (though unsuccessful) by Dr. J. Ware, of Boston, in the New-England Journal.

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Anchylosis.—A detailed account of the case of anchylosis, operated on by Dr. Barton, and mentioned in our last number, p. 498 follows. From the result of this case, Dr. B. proposes to apply the same principle which led to the adoption of this practice, to the treatment of anchylosed joints in other parts of the body, as the knee, shoulder, great toe, finger joints, and the lower jaw, in all of which, a transverse section of the bones would be proper, whilst at the elbow joint an angular division would be necessary, "in order to preserve some resemblance to the natural joint at this part."

Dr. B. does not consider that this treatment will be applicable to every case of anchylosis, but *only* in those cases, where the health is good, and the constitution sufficiently strong; where the rigidity is not confined to the soft parts, but is occasioned by a consolidation of the joint; where the muscles and tendons essential to the movement of the former joint, are sound, and not adherent to the surrounding structure; where the disease causing the deformity, has subsided; where the operation can be performed through the original point of motion, so as to preserve the use of the muscles; and lastly, where the deformity is such as will induce the patient to endure the pain, and incur the risks of an operation.

Art. III. *The New York Medical and Physical Journal, for April,* 1827.

Art. 1, is the annual address, by Dr. Manley, before the Medical Society of the state of New York: as it is entirely of a local nature we pass it by.

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Erysipelas.—Dr. De Leon gives an account of an epidemic that prevailed during the early part of 1826, in Kingston, Jamaica, West Indies. Early in December, 1825, and through the following months, several distinct cases of erysipelas presented themselves, and about the middle of May, 1826, distinct inflammation of the cellular membrane appeared in one or two persons, while in by far the majority, erysipelas and inflammation of the cellular membrane occurred simultaneously. After a short time many persons were affected with cough, and Dr. De L. expresses his belief that what appeared influenza, was a modified form of the erysipelatous epidemic, from the fact, that many thus affected, at length became the subjects of erysipelas in one or other of its multiform appearances. In some cases the attack was sudden, "one victim to the disease was awakened out of her sleep with severe shivering, to which in less than an hour succeeded all the symtoms of the disease

in a highly aggravated degree; and at the expiration of three days, she was a purplish corpse." In the majority of cases, however, the disease was of slow growth; the patient complaining of the usual precursors of an attack of fever, gradually increasing in severity, when the throat became affected with a sense of fulness and tickling, unaccompanied with soreness or pain. "On looking into the throat, the appearances observed were singular and remarkable, so that it was impossible to refer them to any disease described by nosologists. A darkly-coloured, purplish inflammation commenced from the curtain of the palate, spread over the uvula and over the tonsils, and became, in some cases, fainter and fainter as it descended over the pharynx; while in others, the pharynx, as far down as could be seen, was equally inflamed and purplish. Sometimes several veins were seen on the pharynx turgid with dark blood. The tonsils were almost always more or less swollen, and in severe cases covered with small ulcers, which were generally charged with a whitish yellow excretion, and were of a circular figure. They often attacked the uvula and the pharynx, while the mucous membrane became puffy and purplish." In some instances, the papillæ of the tongue were swollen and raised, "so that it appeared sprinkled with red acuminated elevations." The external glands of the neck, axilla, and groin were frequently inflamed and swollen.

"In one case, the cellular texture about the arm and back, and the cellular texture and skin of one of the nates, were simultaneously attacked with inflammation. Suppuration took place in the nates, and large quantities of matter were daily discharged;" in another, the whole surface of the abdomen was attacked with a deep coloured redness, which vanished on pressure and gave no pain, it spread rapidly down the thighs, on which diffused tumours formed, "very painful, hard, massy, and dark red, and terminated in suppuration, and the discharge of a great quantity of matter, with shreds of ruptured cellular membrane." These tumours, also the enlarged glands, were sometimes dissipated by the immediate and repeated application of leeches and hot linseed-meal poultices.—The disease, when properly treated, was rarely fatal.

Treatment.—In cases characterized by high excitement, the saline draught, with liq. ammon. acet and sp. æther, sulph., and purgatives so as to produce several evacuations in the twenty-four hours, were advantageous. When an abatement of the high pyrexial symptoms took place, liquor arsenicalis, with saline mixture and infusion of quassia, and sulphate of quinine were administered. In debilitated subjects the two best remedies were camphor, and the carb. ammon. To allay the irritability of the stomach, tinct. opii, with the effervescing mixture. Leeches over the epigastrium, when the disease was of an ardent character, followed by a blister, were highly serviceable; and when the vital energies were in a sinking condition, pulv cinnamomi comp. and confectio aromatica with the campor and ammonia, and spiced brandy with the nourishment.

"Blisters over the chest diminished the sense of constriction and the difficulty of breathing, which were sometimes present in hysterical subjects. Inhalation of sulphuric æther, or of the aromatic spirits of ammonia, alleviated the anxious sense of suffocation, frequently the most imminently alarming symptom by which the patient was harassed. Gargles of the stimulant and astringent kind were most useful." The ulcers within reach were touched with corrosive sublimate, or with nitrate of mercury in solution, Mercury was only prescribed when the function of the liver appeared to be disturbed.

Some interesting and valuable observations on the efficacy of emetics in spasmodic diseases, by Professor Smith, follow: the value of this practice is well established by experience.—An analysis of the water of the congress spring, Saratoga, N. Y., by Professor Dana. In noticing this paper, as the

last production of Professor D., we may be permitted to express our sorrow at the loss which has been sustained by the profession, and by the school to which he was attached, in the death of this distinguished individual, at the very threshold of his useful labours; and to hope that his place may be supplied by another, equally calculated to reflect honour upon the distinguished station he occupied.

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Dr. Webber describes a case of melæna cruenta, according to Good's nomenclature. Dr. Barnes relates two cases of foreign bodies lodged in the trachea; in the one case, of a child aged seventeen months, the operation of bronchotomy was performed, 58 days after the foreign bodies (a parcel of shrunk beans and gravel stones,) had been forced into the trachea, with complete success; in the other case, Dr. Spence removed a thimble from the trachea of a child, aged two years, by means of forceps, after it had been permitted to remain for *three months.*

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Introsusception.—Dr. Lee of New-York, in a judicious and well written paper, entitled observations on introsusceptoin, as connected with hydrocephalus internus, expresses his belief, that these diseases may originate from sympathetic irritation. The history of a case which came under his observation is given, in which, on dissection, the two diseases were found to exist together. Other cases are also quoted, and in addition, we will add, that in two cases of well marked hydrocephalus, and treated by us accordingly, we have found on dissection, together with dropsical effusion, within the cranium, a series of introsusceptions in the small intestines. Some of the preparations are now contained in our cabinet.

The subject is an interesting one, and we hope that Dr. L. will hereafter favour the profession with his further experience on it.

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An analysis of the Albany mineral water by Professor L. C. Beck, and an account of some galvanic experiments performed on W. Hill, who was executed in December last, conclude the original department.

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We are not in the habit of criticising reviews, but we cannot forbear noticing some remarks contained under the head of a review of Horner's Special Anatomy. If the editor of the New-York Journal will attend but one course of Dr. Godman's lectures on anatomy, (and this he can conveniently do, as Dr. G. is now a Professor in his own city) we believe we may venture to assert that he will be convinced of the decided superiority of the *analytic method* of teaching anatomy, over that generally pursued in the schools. We have adopted this method of teaching, and shall continue it so long as we are convinced of its superiority. The remarks by the editors on a "certain plate" in Godmans anatomical investigations, are *illiberal*, and *unjust*, and *ungenerous*; we are aware that they are *borrowed* from a malignant article which appeared in a journal *once published* in this city; but which "time has fixed in its proper place." Will the editors of the New-York journal pretend to impugn the motives, or to charge with indelicacy, the illustrious Bard of their own city, because he presented to his professional brethren, a "*certain plate,*" in his system of Midwifery? Has not the profession awarded honour and praise to the labours of a Smellie, a Hunter, a Denman, and a host of others, who have enriched that department in a similar way? What would the profession think of us, if we were to say, that "one of the principal attractions" in the New-York Medical and Physical Journal for October last, was a "*certain plate,* which would have been more in place in some works which delicacy forbids us to name?" Such language we should consider an insult to the understanding and feelings of our readers. We have extended these remarks much further than we had anticipated—mindful of that admirable precept, "fiat justitia; ruat cælum;" we were instigated to them by no other feeling than a

desire to remove any obloquy which might fall undeservedly upon a distinguished individual.

There is yet another subject, and we have done. The concluding remarks of the above review are worthy of attention. "Without any special reference, we think that publishing so many text books must be rather burthensome to the students; and we honestly say, that no very substantial benefit can result, except to the author. We do not know in what light this is viewed by others; but we have no hesitation in declaring, that unless a science has been somewhat new modelled, it does not require such a tax upon the necessities of the students, who are with difficulty supplied with the common means of education."

This growing evil, together with other *abuses*, we shall take occasion to advert to, more particularly on a subsequent occasion.

ART. IV. *The New-England Medical Review and Journal. for January and April* 1827.

IT will be perceived by the title, that the character of this work is changed, and that it is now composed as its name imports, principally of reviews. We find nothing in the original department of the two last numbers, sufficiently interesting for analysis. The reviews appear to be written with considerable care, discrimination, and judgment.

Since the publication of our last number, three new medical periodical publications have made their appearance in a monthly form, one published at Cincinnati, Ohio, and conducted by Daniel Drake, M. D., and Guy W. Wright, M. D.; one published in Philadelphia, conducted by N. R. Smith, M. D., Professor of Anatomy in Jefferson College; and another in Boston, conducted by an "Association of Physicians."

Of the necessity for these new publications, the profession is the best judge; we have little doubt, however, but that a medical journal is necessary in our extensive western country, and from the well known talent and ability enlisted in the present undertaking, we anticipate much valuable, and interesting information which would otherwise be lost to the profession. We give an analysis of the first number, and hope to enrich our pages with selections from the succeeding.

We should have supposed that the conductor of the new Philadelphia Journal, after the fate of the late *lamented Medical Review*, of which he was one of the editors, would have been rather timid in commencing another, perhaps it is thought that by leaving off the *respectable* names of some of the former editors, and by coming out in a new dress, the fate of the former may be avoided.

Several cogent reasons are urged in the prospectus for the commencement of the new undertaking,—it is asserted that there is an effort on the part of the medical journalists of this city, to suppress whatever information may tend to advance the *reputation* of some of the editors' colleagues; on this subject we advise him to *touch lightly*—another reason is, "that no one could possibly ascertain, from the journals now published in this city, even the *existence* of a new medical college." For a notice of this college see our last number, page 501.

The new Boston Journal as its name imports is devoted exclusively to foreign medicine; similar to the departments in our Journal devoted to Reviews of Foreign Journals and Analecta.

ART. V.—*The Western Medical and Physical Journal.* (Edited by Daniel Drake, M. D., and Guy W. Wright, M. D.,) *for April* 1827, Vol. I. No. I. Cincinnati.

NEURALGIA FACIALIS.—Dr. Drake describes the history of an interesting case of neuralgia facialis. The patient had been for some years subject to repeated attacks of hemiplegia, which were always relieved by active bleeding, and cathartics; in the course of eight months he had been subjected to the following plans of treatment, for the face affection. A long continued course of moderate purging—a course of tonics—a narcotic course—a course of arsenic—mercurial course; palliatives, antidyspeptics, and antispasmodics—

topical applications, warm bath, with frictions, and exercise; a nutricious and stimulating diet.

He had three epileptic convulsions, a week before Dr. D. saw him, at which time, his situation was not materially different from what it had been the preceding six months. "He had several exacerbations of pain in the twenty-four hours, some of which were intensely severe. They recurred at no regular periods. In the remissions, the affected parts, from the upper region of the forehead to his mouth, became the seat of a great variety of indescribable sensations; such as might be supposed to arise from the puncture of the slenderest needle; from minute insects crawling in the skin; or from the passage of a fluid through the apertures of the sub-cutaneous cellular membrane. The first kind of sensation was generally between the upper lip and eye; the last more commonly in the forehead and temple. None of these feelings were of a pleasurable kind. The whole left side of the face and forehead were often perceptibly tumefied, and sometimes slightly edematous. That side of the forehead, and the eye, were often red—the former exhibiting a circumscribed flush. The sense of taste, in the left side of his tongue, and the natural feeling of his mouth and teeth, of the same side, were much impaired. But none of his teeth were tender or decayed. The left angle of the mouth hung a little, while the *other* was slightly retracted. The pain was generally aggravated by a recumbent position. He was never chilly; but often had flushes of heat in the evening. His tongue was red, slightly furred. His pulse variable, fluctuating from 80 to 100 beats a minute, and not remarkable for force or fulness. He was able to walk about his room. His memory much impaired, and his temper irritable."

"Upon reviewing the history of this case, and connecting the early and repeated attacks of hemiplegia, and the recent paroxysms of epilepsy, with the failure of the various plans of stimulation, so vigorously prosecuted, I could not hesitate in deciding on an antiphlogistic method; and accordingly proposed as the basis of it, blood-letting both general and local; purging; a reduced and vegetable diet; and a consequent abandonment of all stimulants and narcotics."

It is unnecessary to follow the daily report of the case; it is sufficient to state that these measures were vigorously pursued from May 28th to June 25th, after which time he was not bled, nor did he take any medicine except the mineral water of one of the springs in the neighbourhood; a more generous, but still an abstemious diet was ordered. He slept well; ceased to have any pain; his spirits became buoyant; and in July he removed to Philadelphia.

Some judicious reflections by the reporter, follow the history of the case.

Purulent Ophthalmia.—Dr. John H. Savage, gives a short account of the endemic purulent ophthalmia, of Mississippi. This disease was epidemic in Jefferson county and its vicinity, in the summer of 1825 and '26.

Symptoms.—The disease commences by a stiffness, and an uneasy sensation in the eye-lids, and watery state of the eyes; "these symptoms generally begin in the evening, and continue, till the next morning; when a more decided inflammatory condition supervenes, accompanied with great pain and a copious flow of acrid tears. As the night advances, the sufferings of the patient increase; but in the morning, there is a remission which continues 'till the next evening, when an exacerbation takes place, and the night is again passed in sleepless inquietude, and great distress. Sometimes a slight fever is present, but oftener there is no manifest disturbance of the general system. During the severity of the disease, there is great intolerance of light. About the third or fourth day, and sometimes earlier, a secretion of pus takes place. The disease generally lasts, unless arrested by proper means, for ten or twenty-days." In some instances, blindness of one or both eyes has been the consequence.

The predisponent cause, according to Dr. S., appears to be a peculiar temperament of the atmosphere, dependent on some unknown cause. The exciting cause is marsh miasma, from the facts, that the disease prevails in the season of miasmatic diseases; that during the winter it occurs, but in solitary cases, like intermittent and remittent fevers; and that the mode of treatment, which is applicable to the latter, succeeds equally well with the former. The proximate cause is a congestive state of the biliary system.

Treatment.—"This malady has been treated with blood-letting, emetics, cathartics, blisters and the ordinary collyria, with little or no advantage. Experiencing the inefficiency of this method, and referring to the nocturnal exacerbations which constantly occur, I was at length induced to regard the disease, in the language of Dr. Rush, as a misplaced fever, and determined to treat it accordingly. I began by administering ten grains of calomel at night, and a dose of ol. ricini the next morning. If fever was present, and the alvine dejections were much vitiated, I continued this plan as long as circumstances seemed to require. I then gave, during a single remission, about six grains of sulphate of quina, in divided doses. The disease, if not cut short at once by this treatment, lost all its violence. In obstinate cases, an occasional dose of calomel at night, followed by the sulphate of quina, in the morning, was found necessary. By this plan, I have never failed in effecting a complete cure in a few days,—generally in two or three. The various collyria, which I have seen employed, appeared to be of no other use than keeping the eyes clean."

ART. VI.—*The Philadelphia Monthly Journal of Medicine and Surgery.* (Edited by N. R. Smith, M. D.) *for June* 1827. Vol. I. No. I.

Art. 1st. by Dr. Smith, the editor, entitled remarks on the injuries resulting from confinement of the chest by dress, we suppose is principally intended for the perusal of the ladies. We can strongly recommend it to them; they will there learn, that "whalebone and steel" is the cause of the "wasp-waisted lady of our own country;" that the foot of a Chinese belle, "is no bigger than a mandarin's thumb," that the "procrustean girdle" often "spoils the symmetry of the form," and sometimes "sacrifices" a charm that has set "many *poets raving;*" that the corset produces "a remarkable protuberance of the abdomen, which certainly none can admire, except in those ladies who give evidence that 'they love their lords;'" that Dr. S. has seen from this cause, the chest "of a fair actress upon the stage," fixed like a bust of marble, so that in impassioned utterance, when the bosom should heave "like a little billow," there was substituted, "an unseemly anhelitus of the abdomen;" and finally, that "the record of fashion's infirmary" will substantiate the assertion, that this "absurd practice," is often productive of prolapsus uteri. We hope that our city ladies will attentively peruse this valuable essay, and that we shall oftener see, if not the "white chemise:"

"Neath it the breast heave like a little billow."

We would strongly advise Dr. S. to have this paper published in the newspapers of the day; it will show the interest he takes in the comfort and welfare of the fair sex.

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We shall hereafter particularly notice the observations on the pathology and treatment of necrosis, by the respected professor Smith, of Yale College; we omit it, inasmuch as the paper is not yet complete, but is to be continued.

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INCONTINENCE OF URINE.—Dr. Frazer relates a case of incontinence of urine during sleep, in a young girl of fourteen years, which was cured by

the patient, who "acting on the principle, that if little be good, much is better, took upwards of a table spoon-ful" of a compound prescribed by the Dr. in smaller doses, of tinct. cantharides and laudanum.

The father of this patient, when young, was troubled with this habit; he was told by "some old seer" that if he would catch a mouse, roast and eat it, it would cure him; he did so, and such was the power of the imagination, that the habit ceased and never returned.

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New Instrument.—The following is a description of an instrument invented and used by Dr. Smith of New Haven, for the extirpation of enlarged tonsils: "It consists of a ring of iron wire, from one side of which there projects a shaft, or handle, sufficiently long to reach the tonsils, with a piece of wood attached transversely to its extremity for the convenience of holding it; on one side the ring has a groove all round it; in the bottom of this groove it is perforated in two places, one near the handle, the other opposite to this, and these perforations are obliquely outward from the centre of the ring. Another hole is made through the handle, close to the ring, and parallel with it.

"A single, or a surgeon's knot, being loosely formed with a waxed ligature, the loop of which is left so large that it may correspond to the ring, is laid into the groove; one end of the thread is carried through the hole near the handle, the other, through that which is opposite, and then around on the outer margin of the ring, where there should be another groove for it, to the hole in the handle, which having passed through, it comes again in contact with the other end of the thread. One end, then, is in effect thrown round a pully, so as, when drawn, to act opposite to the other. The ring being placed over the tonsil, it may be pressed firmly down around its base, and if, then, the threads be drawn, the knot will be firmly tied upon the neck of the tumour.

"If it be desired to double the knot, it is only necessary to tie another single one, and passing one end of the thread through the most remote hole in the ring, to slip it up to the first knot; but the surgeon's knot is sufficient."

An instrument which bears some resemblance to it is described by Hildanus.

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The dissection of a subject, in which was found an abscess of the liver, which communicated with, and filled the cavity of the pericardium with matter, is given by the editor. The previous history of the case would have been interesting, it unfortunately could not be obtained.

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We congratulate our friends of the North American and Philadelphia Journals, that they have come under the *lash*. Let them bear in mind that the *censure* of *some*, is the highest *praise* which can be bestowed.

Whilst we admire the filial duty which prompted the editor to criticise freely, we can pardon the warmth of style—Dr. Warren's letter is before the Profession, so is Professor Smith's testimony*—the subject had better rest.

* See deposition at page 282, and Dr. Warren's Review of it, page 222, of our last volume.

ANALYSIS

OF

FOREIGN JOURNALS.

ART. VII. *The Edinburgh Journal of Medical Science for January and April*, 1827.

SOFTENING OF THE LUNGS. Dr. Charles Hastings presents us with an account of "a peculiarly soft state of the structure of the lungs." Which he thinks has not received much attention from authors.

It is of frequent occurrence: "without tubercular derangement or any of the usual effects which arise from inflammatory action," such changes take place in the composition of the lungs that they become altogether unfit for the performance of their functions. Profuse hemorrhages sometimes occur, and large ulcerous cavities are occasionally formed, though not of a tuberculous nature, nor are they surrounded by any hardening of the adjacent lung, as in hepatization. Sometimes the cellular structure becomes of a pulpy consistence and makes its way into the bronchiæ, and is expectorated "without any ulcerated cavity being formed."

In all the instances in which the softening occurred "the body, generally, was remarkable for a considerable looseness of texture and relaxation of fibre." Six cases are detailed, where it was found after death, accompanying various other affections; such as, fever, scirrhous liver with chronic catarrh, enteritis, hemoptysis with cachexia, &c.

Dr. H. attempts an explanation of this singular affection, which we think is far from satisfactory. It is predicated on the foregoing observation of the accompanying laxity of fibre, and leads him to make this remark, "if this view of the subject be correct, it goes, in some degree, to explain the frequency of the occurrence of pulmonary consumption in states of great debility;" and enforces the necessity of observing strictly, the tonic plan of treating certain varieties of this disease.

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SYPHILIS.—Dr. Brown's "observations on syphilis and mercury" commence with an elaborate inquiry into the origin of this disease, in which he establishes, upon historical and other evidence, that appears to us indisputable, that the morbus gallicus was not the framboesia or yaws, as has been conjectured, but true syphilis; and further, that it was not imported into Europe from America, but has always existed on the former continent. According to Dr. B. it became epidemic, about the time it was supposed to have originated or been imported, in consequence of *atmospherical* and political causes conjoined. Our author observes, "in times more recent, an exasperation of syphilitic symptoms from atmospheric causes has been noticed. A few years ago, a small book or pamphlet was written by Mr. Geoghegan, describing such an aggravation of these complaints during one season in Ireland." "The peculiar character, too, with which the disease seemed invested,

when it affected our (British) troops in Portugal, may be quoted as evidence, on this point."

Some other peculiarities in the opinions of Dr. B. are worthy of notice. He denies the distinct existence of *pseudo-syphilis* and *mercurial disease*. He believes them both to be true syphilis, modified in the first by peculiarity of constitution; and in the last aggravated by improper treatment: and in this opinion of "mercurial disease" he is "confirmed by having repeatedly found that the antiphlogistic regimen, blood-letting in some cases, small doses of the blue pill, and decoction of sarsaparilla, constituted the most advantageous plan of treatment in this troublesome affection."

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Diseased Thymus Gland. Alexander Hood Esq. details some highly interesting "cases of sudden death and affections of the head, originating from diseases in the thymus gland and chest, illustrated by dissections."

Case, 1—Ann Crea, ætat 9 months: attacked with a kind of convulsive disorder: Warm bath, leeches, and a blister, with occasional laxatives, apparently removed the complaint. The disease returned in a fortnight, though not with so much violence as at first: calomel, rheubarb, and magnesia were given and the head blistered. In one week appeared to be nearly well. The convulsions come on suddenly, and were temporary in their nature, so that the reporter did not see the child in a paroxysm. The account given by the mother was, that when surprised, or awoke suddenly from sleep crying, especially "when it cried vehemently, it became livid, was incapable of making a full inspiration, and the instinctive efforts which were made to draw in breath, were stopped and broken by convlsive struggles reiterated at short intervals." The child was of a full habit, rather flabby, with a livid circle round the eyes. The evening previous to dissolution it was lively, and appeared better than it had been for some weeks, (it always appeared in best health just previous to an attack.) Next morning as the child lay crying on its mother's knee, the crying suddenly ceased, and on turning round she saw it expire in one of those convulsive paroxysms.

Sectio cadaveris.—The blood vessels of the meninges much distended; both hemispheres of the brain dropsical on the surface; brain soft with half an oz. of water in the right ventricle; vessels of the plexus choroides loaded; no blood effused; stomach and intestines presenting a blanched appearance in several places, both seemed unusually small. The glands of the mesentery swollen; on the omentum a small red body of the size of a pea having a granulated structure. In the chest, the heart, lungs and large blood vessels, sound; *thymus gland, very much enlarged;* might weigh more than two ounces. On cutting into it a quantity of thick brownish matter escaped, resembling ill conditioned pus.

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Case. 2. James Neilson, ætat. 13 months, died suddenly after having breakfasted heartily on porridge. The child was playing upon the ground, when the mother happened to tread upon one of its fingers, which excited a strong disposition to cry. The countenance became livid, and after one or two short convulsive efforts at inspiration, the legs and arms trembled, the lip quivered, and in a minute or two he expired. The mother had observed for some time previous that when the child cried vehemently, it was frequently attacked with lividity of countenance, broken and impeded respiration.

Sectio. cadaveris.—Heart natural, no blood or coagulable lymph found in the auricles, or ventricles. Foramen ovale and ductus arteriosus completely closed. Lungs natural, and all the vascular apparatus of the chest, with the exception of the large veins in its upper part, as well as the branches which extended into the neck were as much distended with blood, as if a ligature had been thrown round the descending cava. The *thymus gland* was greatly enlarged, might weigh between two and three ounces, in some

parts slightly indurated. On cutting it, a considerable quantity of matter, of a creamy consistence and purulent appearance, though rather more of a bluish white colour than pus, made its escape. Head not examined.

Five other cases of a similar nature to the foregoing are detailed, they tend to give to the thymus gland a degree of pathological importance that it has not heretofore enjoyed. They seem to us, to throw considerable light on the uses of this organ, which have been a physiological desideratum. We have long been of the opinion that this viscus performed a very important part in the animal economy, and at a particular period of life; that period is the moment of birth.

The lungs in the fœtus have only a sufficiency of blood determined to them for their nourishment, but the moment it becomes a breathing animal, the whole current of the circulation tends that way. What then would be the result, if there were no *reservoir*, such as we suppose the thymus gland to be, to which a sufficiency of blood may be determined during the fœtal state to supply the deficiency which would otherwise follow from this increased demand at the moment the child begins to breathe?—We answer fatal syncope.

Did our limits admit of it, we could extend this principle to several bodies analogous in structure, the uses of which are still unknown, viz: the spleen, thyroid gland, and glandulæ renales Dr. Rush has given a similar explanation of the uses of the first and of the latter we may observe, that it may answer the purpose of a reservoir until the kidneys assume their proper function. The thyroid gland presents a greater difficulty, we should infer from the effects of its derangements as its enlargement is often accompanied with fatuity, that it was associated physiologically with the brain; though it may only be designed to prevent undue determination to the organ of voice. We cannot at present enter more at length into the grounds of our opinions, and we hope to be excused for this digression, which seemed to flow spontaneously from the subject before us.

Two other cases are related by Mr. H. which do not seem to be properly associated with the foregoing; the last is, however, too interesting to be passed over in silence. Case—David Allison, Weaver, ætat 60, had hitherto enjoyed good health, till some cause of merriment strongly excited his risibility. After the cause of mirth had ceased, he continued to laugh, which was soon discovered to be involuntary; he finally fell down in an epileptic fit. For several weeks he had frequent returns of the epilepsy, which was followed by mania; this continued about two months, and then gradually subsided, when he was seized with severe asthma. For some months prior to dissolution, his mind was sane, though enfeebled. He gradually sunk and died about five months from the date of his first attack.

Sectio. Cadaveris. Head; the vessels of the dura mater numerous, somewhat distended with blood, some effusion of water on the surface of the brain; ventricles, contained a considerable quantity of water, and the plexus choroides vascular, loaded with an earthy or rather osseous deposition—a circular piece of bone, thin, somewhat less than a herring scale, was found in the plexus of the right side.

Chest,—cartilages of the ribs ossified; on raising the sternum "a white hard tumour of great magnitude was observed lying to the right of the base of the heart. Veins at the top of the chest much distended with blood: and when the descending cava was cut open the tumour was found to embrace the whole trunk of the vessel, and had greatly diminished its diameter."

About half an inch or an inch and a half above where the vein enters the auricle, a substance of a white cauliflower appearance, an inch in length and two-thirds of an inch in breadth, projected more than one-fourth of an inch into the cavity of the vein. The tumour was from a pound and a half to two pounds in weight; it was very firm in consistence; when cut open a

cream coloured fluid could be pressed out. *Abdomen*, presented no diseased appearances.

In his concluding observations, Mr. H. remarks, that Dr. Underwood has imperfectly described the above complaint of the thymus gland, under the head of inward fits. He also believes it to be the same with chronic croup, the stridulous sound being produced by pressure on the bronchiæ.

A case of CHOREA cured by the use of the argentum nitratum, is narrated by Dr G. Roberts; and a case of CYNANCHE LARYNGEA, in which the operation of laryngotomy, being performed after all the signs of life had ceased, breathing was restored, and the patient lived eighteen hours. By James Thornburn, Esq. surgeon.

OBLITERATION OF THE AORTA.—Dr. A. Monro communicates some particulars of a case in which the abdominal aorta was obstructed by a tumour. The man was middle aged, and after exposure to cold, was seized with pain in the side, difficult breathing, cough, expectoration, and other symptoms of consumption which carried him off in the course of four months. No weakness, numbness, or palsy, of the limbs had occurred, and he could walk till within a day or two of his death. On examining the abdomen, a circumscribed tumour was observed lying upon the second and third lumbar vertebræ, connected with the aorta; about the size of a flattened orange, and adhering to the vertebræ, which were in a carious state. It was filled with coagulated blood. The sac did not appear to be composed of distinct layers, but resembled thick wet leather. The aorta entered into the middle of the sac, and the latter appeared to be a uniform expansion of the former at its division into the iliacs. The tumour was filled up by layers of coagulable lymph, crossing each other in different directions, so as to form a confused and irregular mass. A portion of the aorta immediately above the aneurism was quite impervious.

This case therefore establishes the fact that the circulation may be carried on even below an obliteration of the aorta by means of anastomosis. It also justifies Sir Astley Cooper's attempt to tye this vessel.

All that appears to be wanting is some mode of obliterating the vessel gradually. This desideratum will be most probably attained if the plan suggested by Dr. Jameson's experiments on the carotid arteries of sheep be put in practice. That is, to pass an *animal ligature through* the artery, which causes its gradual obliteration. For an account of these interesting experiments, see the 37th No. of this Journal.

LABORIOUS PARTURITION.—A somewhat uncommon case of this nature is recorded by Dr. Thomas Barnes of Carlisle. Mary Atkinson, æt. 42, was in labour five days; the liquor amnii, had been dribbling off for some time, and the pains were still irregular. When examination per vaginam was made no *os uteri could be felt*; the pelvis seemed filled up by a bulky substance like the infant's head included in the womb. On a second examination still no os uteri could be discovered. Dr Hamilton of Edinburgh, who saw the patient, conjectured that "the os uteri might be forced back towards the sacrum," while the cervix was pushed down by the fœtal head, in front of the pelvis, several instances of which had fallen under his notice. Notwithstanding the most careful examination, however, in this direction, the os uteri could not be distinguished. Dr. H. was again called, when he had examined in the usual way, he passed his right hand along the symphysis pubis, in front of the tumour, which nearly filled the pelvis. Here he found the uterus completely open, and the right shoulder of the infant presented. It was ascertained that the fœtus was dead, and embryulcia being performed, the woman was delivered. She died ten weeks after this of another complaint (cholera,) and, on examination, presented the following appearances:

A tumour as large as the head of the fœtus at the full time, occupied the pelvis. It was seated at the neck of the uterus, to which and to the vagina, it firmly adhered. It was covered by a firm and strong membranous sac and was attached to the posterior part of the cervix and os uteri, and was in contact with the rectum, but did not adhere to it. Its internal structure was cartilaginous.

Dr. Hamilton was accustomed to mention in his lectures a case which he had seen in 1806. The patient was in labour of her first child, though the vagina formed a complete cul de sac, through which the uterus could not be distinguished. On examination per anum, he plainly discerned the head of the fœtus. The vagina adhered through its whole circumference, and on cutting it through to the depth of ¾ in., delivery was safely accomplished and since that time no difficulty has occurred.

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Dr. Campbells' *observations on Dysmenorrhea*, display considerable acquaintance with the subject, but contain nothing sufficiently novel to require notice. The same may be said of Dr. Clendinning's remarks on the subject of *life and organization*, and also Dr. Kinglake's paper on *depressed or exhausted strength*," being merely pathological disquisitions.

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Renal Exlargement.—A case of this description is narrated by Dr Kinglake. On examining the body of a person who had died of a supposed hepatic disease of thirty years continuance, an enlarged kidney of unparalled dimensions was discovered. Real weight full nine pounds, but the apparent bulk, which arose from its loose and extended texture, indicated a greater weight. "The pelvis of this morbid kidney was visible, and its surface had retained its smooth, organized appearance" The enormous size which it had attained, was made of a long series of coagulable effusions, laminated, condensed, and organized, in a manner that imparted to the general mass vascular connection and vital support.

"The superadded substance appeared to be furnished by a process of accretion or growth of new parts, and had the aspect of condensed cellular and adipose texture, in which were follicular or encysted cavities, promiscuously filled with a puriform fluid, and with osseous and caseous matter."

The patient was a medical practitioner, æt. 70 years, and he was himself confident the liver was the seat of disease. He suffered no acute pain, and the uneasiness experienced was referred to the hepatic region. The liver was rather diminished in size, but was not apparently diseased.

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Spontaneous Depilation.—A singular case of this nature is communicated by W. J. Carson, Esq. Mr. J. H. in B—, unmarried, æt. 35, a strong, muscular man, free from constitutional or local disease, with the exception of that before us; has enjoyed excellent health up to the present time, and is engaged in agriculture. He is completely denuded of hair. Mr. C. was unable to discover the slightest vestige of any, either upon his head, body, or extremities—even the supercilia, vibrissæ, and pili auricularis, have entirely disappeared; his skin is of a healthy colour, and free from the slightest irregularity of surface. He states, "that the hair of his head was always of a lightish cast; his beard, whiskers, &c., reddish, and that every where it was particularly plentiful and strong. He observed first a spot to become bare over the buccinator muscle, while shaving; as he continued to shave, the hair of the beard came out by the roots in such quantity that after a few repetitions of this process, he had not a hair on his face. On the day of its first appearance on the face, he had his hair cut, and a bare spot was observed over the transverse ridge of the occiput. This continued to spread, and at the end of a month "he was so totally denuded as not to have a solitary hair on any part of his frame." During the progress of this disease he experienced no pain, sickness, or uneasiness. Another remarkable

feature of this case was, that the finger nails become shrunk and withered, and appeared not to be nourished at their roots, though they did not fall off. They were of a whitish colour, brittle consistence, and ragged edges. These appearances arose three months after the loss of the hair.

The toe nails were not in the slightest degree affected. "The head perspires so freely that it is always moist, whilst there is no perceptible perspiration upon any other part." He had used spiritous liquors, but not to excess, had discontinued them for malt liquors, and finally returned to them. What effect this could have had in the production of this singular disease we are at a loss to determine.

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Ephemeral Arthritic Fever—Which was prevalent on board the hon. company's ship Asia, during the months of February and March, 1825, by J. A. Ore, surgeon. A fever of the quotidian type became prevalent on board H. C. S. Asia. The general symptoms were pain in the head and slight pains in the joints of intricate structure, such as the knees, ankles and wrists, with rigors universally diffused, great prostration of strength, furred tongue, hot skin, and accelerated pulse, increased particularly four or five hours after the complete accession of fever.

The most severe period of this fever seemed to be between noon and midnight of the first day after its complete formation; and *on the second the patient had in general no fever, but complained chiefly of arthritic pains,* "which in nineteen cases out of twenty remained for four, six, or sometimes ten days;" and long after the seaman had returned to his duty, he was, on a change of weather, compelled to apply for relief, from universal pain, numbness, and inability to retain his hold.

Treatment.—It consisted in giving, at the commencement, an emetic of ipecac. (℈ij.) and a few hours after, a purgative of calomel, in small doses, followed by senna and epsom salts, scammony, jalap, or some of the resinous cathartics. Next day the pulv. ipecac. comp. in xv gr. doses, repeated thrice a day; a liniment of cocoa-nut oil and ammonia was rubbed on the affected joints. When the habit was full and plethoric bleeding was resorted to.

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Arsenic.—A case of poisoning by arsenic, with remarks on the decolorizing process of Mr. Philips, by Wm. H. Forrest, contains nothing of value, with the exception that it illustrates the inutility of that process. The fluid contents of the stomach afforded ample evidence of the presence of arsenic, by the ordinary tests. When decolourized the clear fluid presented but scanty traces of this poison. "In fact, it appears that the whole of the arsenic is removed with the colouring matter from the liquid."

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Dr. Kinglake's papers "*on General and Local Plethora,*" and "*on Morbid Disposition and Action,*" are not sufficiently practical to require further notice. The same observation applies to Dr. R. Abraham's *chapter* "on Medicines of whose immediate action we are conscious," *selected* "from a larger and systematic work on the operations of medicine."

For most of the important matter of Mr. T. P. Teale's paper on the Tonic Treatment of Inflammation, we must refer the reader to the early part of our review of "Wallace on Moxa," in the present number.

Tumour in the Neck—which was situated beneath the digastric fascia and behind the sub-maxillary gland; extirpated by Benj. Bell, Edinburgh. This tumour was apparently about the size of a small orange, situated under the lower jaw, on the right side, anterior to the insertion of the masseter muscle, and in the region of the submaxillary gland.

No vessel required a ligature during the operation, and the patient did not lose above two ounces of blood.

The tumour lay sacculated deep behind the jaws; on reaching the sac a

small opening was made in it, and it was slit open from above downwards, and the tumour turned out by the handle of the knife. It was encysted, was about the size of a walnut, and on cutting it a quantity of curdy purulent matter escaped; its parietes were a line in thickness and of a cartilaginous consistence. The man recovered.

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Action of Titanium and Osmium.—Some experiments to determine the action of these substances on the human frame are detailed by Chs Gmelin.

Experiment with Titanium.—One drachm of titanic acid mixed with meat and given to a dog, manifested no action.

Experiments with Osmium.—Exp. 1st. Nine drachms of a fluid, holding osmium in solution was injected into a small dog's stomach. In two minutes vomiting occurred and was renewed almost instantaneously for more than an hour. At first the fluid ejected had a strong odour of osmium; afterwards he could only eject a white froth with great effort; he was affected with cough; refused to eat next morning; considerably emaciated; recovered by degrees.

Exp. 2d. Nine drachms and a half of the above solution was injected into the stomach of a rabbit. It walked up and down; would not eat; became extremely emaciated. In four days it was made the subject of the following—Exp. 3 Nine drachms and a half were introduced as before and shortly afterward the same quantity was repeated. Soon after the second dose, the animal became very weak, and the posterior extremities seemed paralyzed. It gradually recovered and the power of the limbs was restored. The following morning it was found dead and cold.

Dissection.—The animal much emaciated; the internal surface of the esophagus, stomach, and small intestines, was as black as charcoal, and hard to the touch. The walls of the stomach, near the cardiac orifice somewhat œdematous. The black colour evidently resulted from the reduction of the oxide of osmium by the animal matter;" no trace of inflammation upon the blackened parts was perceived; there was no bad smell nor disorganization of texture. All the other organs natural.

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Continuation of Dr. Clendinning's remarks on the subject of *life and organization* are passed by for the reasons assigned in reviewing the January number.

Art. VIII. *The Edinburgh Medical and Surgical Journal, for January,* 1827.

Aneurism.—Robert Liston, Esq. surgeon, reports four cases of aneurism, which are valuable and interesting from the circumstances attending each.

In the first case, the aneurism was situated in the femoral artery of the right thigh, at the point where it perforates the tendon of the triceps. The artery was accordingly exposed and tied above the tumour with a single silk ligature. The ligature separated, the wound healed, and the patient continued well, until the expiration of nearly 10 months, when there was a return of the pulsation and tumour. These symptoms gradually yielded to the application of a compress and bandage extending from the toes upwards, with the aid of rest, cold applications and moderate diet.

Case 2. The femoral artery was secured in the usual way, on account of a popliteal aneurism of the left leg; and after the operation attempts were made to preserve the natural temperature of the limb. Five days afterwards the patient complained of violent pain in the calf of the leg and instep, the toes were pale and cold.

Phlyctenæ soon appeared on the foot and leg, and dark streaks could be traced up the thigh. The limb was cold and nearly insensible, the countenance anxious and contracted, perspiration copious, with a weak, frequent, and fluttering pulse.

The thigh was immediately amputated below the deligated portion of artery.

The patient's recovery was protracted, though the wound and stump did well. It appeared that the gangrene was the result of the assiduous employment of hot saline fomentations, in opposition to strict injunctions given.

Case 3. Was an aneurism of the left radial artery, in which graduated compress and bandage was employed for eight days; when the tumour which had subsided, now enlarged and a slight excoriation appeared. The humoral artery was secured. On the nineteenth day hemorrhage occurred, from the separation of a slough at the part excoriated. The artery was then secured above and below the seat of original wound and the patient recovered the perfect use of his arm.

Case 4. Was a very extensive aneurism of the right axillary artery, for the removal of which two ligatures, at the distance of three quarters of an inch, were applied on the subclavian. For some days the prognosis was favourable, as the tumour began to collapse, the natural heat and sensation was returning and slight pulsation could be felt in the radial artery. The situation of the patient soon wore a different aspect from repeated oozing of blood, and on the fourteenth from the operation a considerable oosing of dark putrid blood again took place, which was arrested by compress, but the patient sunk. The post mortem examination was satisfactory, and Mr. Liston concludes that the fatal issue was to be attributed to the morbid change in the coats of the artery and the immense size the tumour had attained.

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Cellular Inflammation.—J. H James, Esq. surgeon, Exeter, describes his own case, in which very extensive local disease with constitutional disorder was caused by the absorption of morbid virus.

Mr. James having assisted at the examination of a man who had died of diabetes, in whom erysipelatous inflammation occurred round the orifice after repeated venesection; on the following day set out for London. A painful sensation was soon felt in the left biceps, over which two red lines were traced, marking the course of inflamed absorbents. On the following day, there was faintness and depression, succeeded by a rapid increase of the swelling and redness of the arm. There was a sensation of burning heat, with great tenderness and enlargement of the axillary glands.

On the subsidence of the diffuse inflammation two *carbunculous* abscesses formed in the course of the absorbents, which had a livid tinge, with phlyctenæ on the surface, containing sanies and sloughs of cellular substance. The seat of the nail-spring was occupied by an indolent foul ulcer. Extreme nervous irritability with spasms of the back and trunk followed the state of prostration.

On arriving at London, Mr. Abernethy directed frequent evaporating poultices, small doses of calomel and jalap, and effervescing draughts. In about a month Mr. J. was enabled to return to Exeter.

After some general remarks on the influence of morbid poisons, Mr. J. concludes with recommending the hands of the dissector to be washed in nitric acid and water to ascertain the seat of the wound or scratch and afterwards to suck the part and cauterize freely.

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Phlegmasia Dolens.—A case of this disease is drawn up by Hugh Fraser, surgeon, and communicated by Mr. Lizars. On examination after death, no morbid alteration could be discovered in the vascular system, and from the history of the case and morbid appearances presented on dissection, Mr. F.

is led to accord with Dr. Hull's views of its pathology, viz. that it consists in a "peculiar inflammation seated in the muscles, cellular membrane, and inferior muscles of the skin."

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Digitalis in Epilepsy.—Mr. R. W. Scott reports the case of a boy aged nine years, who when nineteen months old was attacked with convulsions from the sudden suppression of a diarrhœa. When arrived at his fifth year he was seized with regular fits of epilepsy, amounting to twelve, and sometimes twenty in a day. After continuing four or five months, they were arrested by medicine, and did not return until the expiration of nine months, when he again enjoyed an exemption for the same period. During the succeeding four years he never passed a day without repeated attacks, which were excited by the slightest causes, as fear, anger, fatigue, crying or exposure to a current of air.

"He has been under the care of several medical men. He has been cupped; had leeches and blisters applied: and taken a variety of medicines. I also tried several different means without any obvious advantage. He took nitrate of silver for a considerable time; ammoniated copper; arsenical liquor, and sulphate of quinine; he had also a course of mercury, and daily purgatives. Leeches and blisters were repeatedly applied; and an issue was established and kept open for two months. But, under applications of this nature, his mother thinks the fits were more frequent and severe.

"I then prescribed the tincture of digitalis, in the dose of six minims three times a-day. In a short time the frequency and duration of the paroxysms were diminished; and, by gradually increasing the quantity to twelve drops, they altogether ceased; and he continued free from them for four months, though the twitchings did not entirely cease."

The medicine was now discontinued, and strict attention paid to his diet, state of the bowels, &c. Notwithstanding the fits again recurred, though much milder, and only once in ten days. An attack was usually prevented by giving a teaspoon-ful of the tincture at a dose.

From all which, Mr. Scott is prepared to rate the powers of digitalis pretty high, and considers it deserving of more extensive trial in this disease.

A case somewhat analogous, from the notes of Dr. Briggs, concludes the paper.

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Endemic Fevers of Spain.—A portion of an elaborate paper, containing observations on the spring and summer endemics of that country, is communicated by Dr. Proudfoot. From its length we feel unwilling to follow our author, and therefore beg to refer our readers to the paper itself.

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Extraction of a Polypus.—Wm. Robertson, Esq. details the case of a man aged 64, who had a polypus in the right nostril, so large as to obstruct completely the passage of air, and very much disfigured that side of the face, at the same time causing an absorption of the contiguous bones. On failing in the usual mode of operating, Mr. R. divided the nasal cartilage on the side affected; commencing the incision at the point where the lachrymal duct terminates, and continuing it to the under edge of the cartilage. The body of the polypus was thus exposed, and transfixed with two ligatures. By continued efforts, Mr. R. succeeded with the aid of the knife, in separating its connexions, and bringing away the whole mass, which weighed 3 oz. 6 dr.

The edges of the wound were retained in contact by sutures and adhesive strips. In a fortnight the wound was completely healed, leaving but little deformity.

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Amputation at the Shoulder.—Dr. John Evans relates the case of a boy ætat. 16, in which amputation at the shoulder-joint terminated favourably. Immediate amputation was determined on, as the only means of averting his

dissolution, as the right humerus was necrosed nearly its whole length, approaching extensive deep-seated abscess occupied the elbow-joint; and extensive ulceration involved other parts. Extreme emaciation, profuse night sweats, with a feeble pulse of 120, sufficiently evinced a prostration of vital energy and the influence of local disease over the general system.

It is only necessary further to remark, that the double-flap operation was had recourse to; and although the pulse was commanded by making firm pressure on the subclavian, with the handle of the tourniquet, there was considerable hemorrhage from this vessel, and difficulty in securing it on account of its retraction.

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Surgical Observations.—Mr. Syme states, that in a previous No. of this Journal, he advocated the flap method of amputation in preference to the circular incision. To the objections preferred against his method, he replies, that it is less painful, and if the operator possesses moderate skill, with forceps, can secure the arteries, although divided obliquely. That the muscular mass is chiefly absorbed, and leaves its cellular substance, as a useful addition in the formation of the stump.

Mr. S. objects to the *single* flap in amputation below the knee, and recommends the following plan. "Having ascertained with my left hand the point where it was necessary to divide the bones, I applied the point of a knife, such as is usually employed for flap amputation, at the inner edge of the tibia, a little lower than the place for sawing, and cut obliquely, downwards and outwards, over its flat surface; then entering the point where this preliminary incision terminated, I transfixed the limb close to the fore part of the fibula, and formed a good flap from the peroneal muscles, &c. I next passed the knife behind the bones, so as to make a second flap from the remaining soft parts. The operation was completed as usual; and the flaps, which were of nearly equal size, fitted extremely well. The patient had a speedy recovery, and possesses a most comfortable stump."

Onychia Maligna.—Mr. S. considers Mr. Wardrop's plan of treating this disease, by the internal exhibition of mercury as inefficient. There is an obvious difference he observes, between a nail that is destroyed by external violence, and one whose imperfection depends on a diseased matrix. When extraction of the nail is ineffectual, we have been advised to correct the morbid state of the secreting organ, by freely applying caustic; but when this has failed, and the disease still remains intractable, Mr. S. resorts to amputation.

Excision of the head of the Humerus.—Mr. S. gives a second case in which this operation was successfully performed on account of extensive caries of the shoulder-joint.

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Profuse Hemorrhages after Scarlatina.—Dr. John Paul communicates the case as it occurred in a boy aged seven years. Antiphlogistic measures were employed during the fever, and he was considered in a convalescent state for several days, when a bleeding was observed to take place from the nose, ears, eye-lids, gums, attended with petechiæ and hæmaturia, which continued four days. The principal remedies employed were sulph. quinine in liberal doses, ol. terebinth and a nourishing diet. The patient completely recovered.

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Pompholyx Diutinus.—Mr. H. C. Sherwin relates the case of a woman, ætat. 73, who was seized with a troublesome itching, followed by a vesicular eruption, which would disappear in forty hours, and then would appear a fresh crop, preceded by intolerable itching.

This troublesome affection continued two months, during which period her general health did not appear to suffer greatly. The treatment consisted chiefly in purging, the repeated use of the warm bath, followed up with vegetable and mineral tonics. Pursuing this course without benefit for ten

weeks, the old woman resolved to change her medical attendant, when her disease became greatly aggravated, and the whole cutaneous surface was covered with blebs of every size. At this period, she again became Mr. S's patient, when five grains of pil. hydrg. was directed every four hours. After the 6th day, the quantity of pill was reduced to 15 grains daily, and gradually discontinued as she recovered.

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Varicella, Variola and Vaccination.—Dr. T. Barnes describes an epidemic varicella, which appeared at Carlisle, in 1826, to which is prefixed an account of the relative state of small-pox and vaccination. We propose to make a few extracts of the leading facts therein detailed. It appeared from the annual reports registered at the Carlisle Dispensary, that in 1821, in a few cases, small-pox had attacked first, and in one, both diseases pursued a regular course. In six cases which had been vaccinated, and in four after several days exposure to variolous contagion, the disease was so modified that they recovered at the end of a week. In 1823 the unprotected were most frequently attacked with small-pox, although it has occurred in persons previously vaccinated, and in some it appeared a second time. Out of ninety-one cases unprotected, sixteen died; of twenty-two that had been vaccinated, one died, and two that previously had small-pox both recovered.

"In some cases small-pox was extremely mild, in others very malignant, and between these extremes were cases of different degrees of severity. In almost all the cases of small-pox occurring after cow-pox, the disease was mild, of short duration, and unattended with danger,—incrustation was generally completed on the sixth or seventh day. It is proper, however, to state, that, in a girl ten years old, the disease was severe, but ended favourably; the eruption was confluent, and interspersed with petechiæ. In another case, small-pox proved fatal after vaccination; but there is reason to believe, that in neither of these cases had the cow-pox been genuine.

"Although vaccination does not give complete protection against small-pox in every case, yet the late epidemic has afforded much satisfactory evidence of its preventive powers, and of the incalculable benefits derived from it. Many instances have occurred of vaccinated persons escaping, and the unprotected taking the disease, in the same family, even where they were living in the same room, sleeping in the same bed, and were exposed to variolous contagion of the most malignant kind."

In Dr. B's sketch of varicella, we discover nothing peculiar in symptoms or treatment.

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Hæmorrhœa Petechialis.—A case of this disease occurring in a seaman aged nineteen, is reported by Arthur Kift, in which venesection, blisters, purging and tr. digital., with acid suph. were the principal remedies employed. On dissection, dark livid and gangrenous spots were discovered in various portions of the alimentary canal; from all which Mr. K. concludes that if depletion had been carried to a greater extent a different result might have followed.

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Purgatives in Chorea.—Dr. W. Belcher, reports a case of this disease, which was successfully treated on Dr. Hamilton's plan, viz. active and long continued purging assisted by the application of counter-irritants. On a failure of the purgative plan, Dr. Chisholm strenuously advises the repeated application of blisters to the sacrum, while active purging is kept up.

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Purgatives in Epilepsy.—Mr. W. Gunn gives a case which appeared to owe its origin to a deranged state of the primæ viæ as manifested by furred tongue, constipated bowels, and impaired appetite. Hence the obvious indication, that of restoring their healthy functions by free purging, effectually removed the disease.

The remaining paper, gives a concise account of a malconformation of the bladder and organs of generation, and is drawn up by Dr. H. Vernon.

ART. IX.—*The London Medical and Physical Journal, Monthly, for January, 1827.*

CELLULAR INFLAMMATION.—The substance of a clinical lecture, by Henry Earle, Esq. on diffused cellular inflammation, is highly valuable. He objects to the term phlegmonous erysipelas, (because he thinks it likely to be confused with acute erysipelas,) and because he considers erysipelas essentially as an affection of the skin, whilst the disease under consideration exerts its influence principally on, and has its seat in the subcutaneous tissue and fascia. The inflammation is acute; rapidly diffused; and if not quickly arrested, terminates in extensive suppuration and sloughing. Mr E. states that he has known, in the short space of thirty-six hours, "the whole integument of an upper or a lower extremity involved in one extensive sloughing abscess." It most frequently takes place in the extremities, and generally follows punctured wounds, or bruises. "In the majority of cases, it is accompanied in the early stages with well-defined inflammation of the absorbents; but these soon become so involved in the general tumefaction of the limb, that they cannot be traced. This swelling takes place with great rapidity and to great extent, accompanied with a dusky red appearance of the surface. In the earlier stages, there is a peculiar elastic feel in the integuments, which afford much greater resistance than in common œdema. If the integuments be divided at this period of the affection, the fat and cellular substance cuts with great crispness, and the wound gapes much. After a time, the sensation imparted to the touch, is somewhat analogous to the crepitation of emphysema: it has a peculiar boggy feel; and now we find, on cutting down, that the work of destruction has taken place."

The constitution participates in the local affection—the secretions are either all suspended or deranged. The circulation is hurried; pulse hard, contracted, and frequent; the countenance becomes anxious; if the patient drops asleep, he awakes in alarm, or in a state of delirium. When extensive sloughing takes place great prostration results, and a state resembling the worst form of irritative sympathetic fever often closes the scene.

Treatment.—Mr. E. bears ample testimony to the merits of the plan recommended by Mr. Copland Hutchinson, which, if adopted in time, seldom fails to arrest the progress of this formidable affection. It consists in "making very free longitudinal incisions, if possible before suppuration has taken place, through the swollen inflamed integuments down to the fascia or muscles. The vessels of the skin should be allowed to bleed freely, and even encouraged by warm fomentations; the limb should then be enveloped in a warm bread-and-water poultice. A large dose of calomel, antimony, and opium, should be administered; and after some hours the patient should be freely purged with senna and salts, or some other active aperient. If the incisions be made sufficiently large and deep, the relief is very speedy, and it is seldom requisite to repeat them. In a few hours I have witnessed the subsidence of tension and pain, the nervous system tranquillised, and the secretions restored."

Mr. E. enters into a reply to objections which have been urged against this practice; but facts are obstinate—a few well attested cases, will outweigh a host of objections, the result of closet speculations.

Seven cases are adduced, all illustrative of the success of this mode of treatment. One case is particularly interesting and valuable, as it is the first instance of the application of this practice to the treatment of diffuse cellular inflammation arising in consequence of morbid poison. We abridge it.

Mr. C. E. B., ætat. 21, one of the dressers in St. Bartholomew's hospital, on

the 21st of April, in opening the cranium of a man who died of gangrenous erysipelas, pricked the middle finger of the right hand, with a spicula of bone. The usual symptoms of a dissection wound, arose, and the usual practice in such cases, continued until the 28th, when he was much worse. "The inflammation had extended to the deltoid muscle on the outer side, but did not appear to have reached the axilla on the inner side; nor was there any pain at this part, or disposition to extend over the pectoral muscle. From the insertion of the deltoid downwards, the whole arm was as tense as possible, and felt remarkably firm when pressed. The colour was a dusky red, rather more vivid at the upper margin. He had been delirious all night, and appeared rather comatose. His countenance was shrunken, wild, and ghastly. He was so weak that he could not sit up in bed; his pulse was irregular, feeble, and fluttering; his tongue covered with thick brown fur. It was evident that he could not long survive under these circumstances, and, although I had no evidence in favour of the practice in a similar case, I resolved to make large and deep incisions, provided it met with Mr. Lawrence's concurrence, who was so obliging as to visit him with me. Mr. L. entertained the same view of the case, and in his presence I made three deep incisions,—one commencing a little above the insertion of the deltoid, and more to the outer side, which extended down to the olecranon; a second, about six inches long, from just below the olecranon to the wrist; and a third, about three inches in extent, on the inner side of the forearm. No suppuration or sloughing was apparent, but the wounds gaped much, and the fat was very firm and granular. The wound at the outer side of the forearm bled very freely, to the extent of from thirty to forty ounces; after which the limb was enveloped in a large bread-and-water poultice. In the evening, when I saw him, his countenance was much improved; and his pulse was steady, soft, full, about eighty beats in the minute. The pain had nearly subsided, except in his finger. He was ordered a dose of calomel and jalap, and to continue the opium after its operation."

29th. He passed a tranquil night, but without sleep; countenance improved; pulse stronger, and quite soft; arm quite easy.

30th. As yesterday; no sleep. In the evening, restlessness and slight wandering. Two grs. of opium and six of camphor, procured repose, for the first time since the receipt of the injury. Next morning improved in every respect. Suppuration had taken place at the wounds; bowels moved with infus. sennæ and tinct. jalapæ. anodyne repeated at night. From this time he continued to go on most favourably: healthy suppuration was established, and by light dressing and bandaging, the whole rapidly filled up and skinned over. In a few days he was ordered sulphate of quina, and generous diet. Rapidly recovered.

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Injuries of the Head.—Treated at Middlesex hospital.

Case 1. Treated by Mr. Shaw, of a lacerated wound of the scalp, which was followed by erysipelas, and the death of a portion of the skull. The erysipelatous inflammation spread from the wound and extended down the neck; this, under proper treatment, declined; but as the laceration was extensive, a portion of the parietal bone nine or ten inches in circumference denuded of its periosteum was exposed. After fourteen days from the receipt of the injury, so favourable was the progress of the case, that notes were not taken. On the 30th day symptoms aggravated; on the 31st, delirious, and towards evening fell into a comatose state, and died during the night.

"*Dissection.*—The pericranium surrounding the dead portions of bone, as seen externally, was much thickened, and, on being separated from the living bone, the latter presented a worm-eaten appearance: it was perforated by numerous minute holes, which seemed to have been caused by a sort of interstitial absorption, which had been going on in the substance of the

bone. The same appearance presented itself on the internal surface of the skull. A small portion of bone, far removed from the centre of the external caries, was diseased throughout its whole thickness. The dura mater at this part had separated from the bone, and was thickened; the surface of the brain immediately beneath was not discoloured. The whole mass of the brain appeared to have been in a state of general excitement, for an effusion of serum into the ventricles had taken place: these were much enlarged. No obvious appearances of inflammation were present."

The operation of trepan in such a case, is a difficult question. It would be dangerous to cut away so large a portion of the skull; besides, it is an established rule, that if the operation is to be performed, it should be before the symptoms of excitement come on, or after they have subsided.

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Case 2d, treated by Mr. Shaw. A man, aged thirty-seven, had been subject to epileptic fits for twenty years. In one of these he fell, and his head came in contact with the heated bars of a grate; a severe and extensive burn of the scalp was the result, and in a few days, the injured parts sloughed, and the bone was exposed. He had four attacks of maniacal delirium, at regular periods of three weeks; on the decline of which he fell into a profound sleep of some hours, out of which he awoke perfectly recovered. His symptoms now generally resembled those of a patient labouring under acute typhus. On the morning of the 10th day he became quite paralytic, and in the afternoon fell into a comatose state. He remained in this condition till the night of the 13th day, when he died.

"*Dissection.*—The skull-cap being removed, it was found that a part of the dura-mater, not much larger than a shilling, and situated under the larger portion of diseased bone, was detached from the skull, and thinly covered with an extremely minute quantity of a sero-purulent fluid: lymph had been thrown out upon the surface, so as to produce some degree of inequality and thickening in this part of membrane. A small shred of lymph was found attached to the inner and secreting surface; the other parts of this membrane were healthy. No thickening of the arachnoid membrane, or other signs of inflammation, were observable, except about an ounce of limpid serum contained in the ventricles. In other respects the brain seemed perfectly healthy, and retained its natural degree of firmness throughout."

At no period did it appear that this man had any symptoms which indicated an operation; we had none which occur from the presence of dead bone; nor any of those which are so characteristic of the inflamed dura-mater.

Some cases of concussion treated by Mr. Bell and Mr. Shaw, which offer nothing particularly interesting, follow.

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Ulcer of the Stomach.—Mr. Hunter relates a case of ulcerated stomach, the opening of which through the peritoneal coat, occasioned very violent symptoms, nearly resembling colic, immediately preceding death.

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Emphysema.—Jas. Sym, Esq. relates a case of emphysema, in which the evidence obtained from the general symptoms alone would have been exceedingly perplexing had he not employed the stethoscope, from which a clear and certain diagnosis was obtained. In this case it was found that the lung adhered extensively to the parieties of the thorax, so that if the operation of puncturing the pleura between two of the ribs had been performed, it is "probable," nay *certain*, that an additional wound would have been inflicted upon the lung.

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Rheumatic Ophthalmia.—In our last No. p. 455, we mentioned Mr. M'Kenzie's divisions of ophthalmia, and took a short notice of the first species, or catarrhal: we now take up the continuation of the paper, de-

scribing the second, or rheumatic. This has its seat in the albuginea, sclerotica, or periosteum, within and around the orbit; the redness is zonular, and seated under the conjunctiva; the chief pain is not in, but round the eye, and is of a stinging kind; the exciting cause is, exposure to a current of cold air. "In general, there is no tendency to chemosis in the pure rheumatic ophthalmia, nor do the eyelids take part in the disease."

"Dimness of vision uniformly attends this disease, depending on an accompanying haziness of the cornea and pupil attended by slight contraction of the pupil, and sluggishness in the movements of the iris. If only one eye is affected, which is generally the case, (at least for some time,) the pupil of that eye is seen at once to be less than that of the sound eye. The iris becomes even slightly discoloured; it becomes greenish, for instance, if naturally blue; and the attending iritis may even go on to evident effusion of coagulable lymph within the pupil. It must be understood, however, that a severe degree of iritis rarely attends this rheumatic sclerotitis."

Treatment.—In no species of ophthalmia is bleeding so necessary; we can better illustrate the treatment by the selection of a case.

"June 10, 1825; Isabella Gall, aged thirty-five. For the last twelve days, dimness of the sight of the left eye, redness of the conjunctiva, and particularly of the sclerotica; the vessels running in radii a little over the edge of the cornea. Severe pain in the eye, with hemicrania, much aggravated from twelve at night till five in the morning. Slight nebula of the cornea, and sluggishness in the motions of the iris. Attributes the complaint to exposure to cold.

"Mitt. sanguis e brachio ad ℥xij. vel. xv.—Hirudines viij. temp. sinistr. cras mane.—Belladonna ad palpebr. sinistr.—R. Subm. hydr. gr. v.; pulv. Jalap. gr. xv. M. cap. q. p.

"13.—Pain of the head and of the eye much relieved, and the zonular redness less. An attack of pain from half-past four till six this morning.

"R. Subm. hydr. gr. ij.; opii gr. ss. M. fiant tales doses vj. cap. j. m. et v.—Vesicat. pone aurem sinistram.

"15th.—An attack of pain this morning from six to seven.

"Repetantur hirudines.

"17th.—Symptoms greatly abated.

"Cont^{r} pulvis subm. hydr. et opii, m. et v.

"22d.—Rather more pain deep in the eye.

"Subm. hydr. gr. ij; opii gr. j. M. fiant tales doses vj. cap. j. m. et v.—Vesicat. temp. sinistro.

"24th.—Instill. gtt. vini Opii oculo sinistro.

"29th.—Occasional attacks of pain in the eye.

"Repetat. vesicatorium.—Cap. pulv. ipecacuan et opii ℈j. hora somni.

"July 6th.—dismissed cured."

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Rupture of the Urethra—treated at St. Thomas's hospital.

Case 1, treated by Mr. Travers. Rupture of the urethra without external wound, occasioned by falling across a wooden railing; a similar case treated by Mr. Green. For the plan of treatment pursued in these cases, refer to Dr. Jameson's paper, in the 7th vol. Med. Recorder, p. 251.

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Strangulated Hernia, treated by Mr. Tyrrell. Dec. 5th, 1826. A man was admitted at St. Thomas' hospital, who stated he had been the subject of inguinal hernia for eight years, but had never worn a truss; had occasionally attacks of pain in the tumour, with costiveness, which were always relieved by a little brandy with an aperient. Since the first, no evacuation; on the 2d, pain in the tumour, with irritability of the stomach, which continued without relief until the 5th; when the tumour was tense, painful, and tender, but not œdematous; the scrotal surface red and shining, and fluctuation was

perceptible at the lower part. "The swelling did not increase immediately after leaving the external abdominal ring, but a space of about one inch intervened between the ring and the tumour. This space, and also the inguinal canal as high as the internal ring, were hard and incompressible, and did not dilate on coughing. The patient vomited very frequently, with scarcely any effort whatever, and complained of tightness across the abdomen; which was, however, neither very tense nor very tender. The pulse was about 100, small, but without the threadiness usually attendant on peritoneal inflammation."

After attentive consideration, Mr. T. and Mr. Callaway, thought the symptoms and appearance more resembled inflammation of the testicle than hernia. A small puncture was made which was followed only by blood; as the symptoms were not urgent, it was determined to wait, and if an evacuation could be procured, the existence of hernia would be disproved. Treatment accordingly. Twelve P. M. symptoms the same; no evacuation; countenance not anxious; no hiccough; vomiting continued, matter offensive, but had no fœcal odour. To determine the precise nature of the tumour, an operation was resolved upon; which demonstrated the presence of omentum and intestine, firmly adherent to the sac, strangulated, and the latter gangrenous. It is unnecessary to follow this case in detail; the man died.

This case is particularly interesting from the circumstance, as we have seen, that several of the diagnostic signs were wanting. The constitutional symptoms throughout were singular; we are told that when gangrene exists, hiccough is a principal symptom; that in peritonitis, the abdomen is tense, and extremely tender, and the pulse hard, sharp, and thready; these symptoms were all wanting in the present instance, and yet the intestine was gangrenous.

It cannot be too strongly enforced, that when doubtful symptoms are present, an operation ought to be performed early to ascertain the facts.

ANALECTA.

1. BISCHE—A MALIGNANT DYSENTERY OF TRINIDAD.*—The first case which Dr. O'Connor met with, of this strange and dire disease, was in the person of a young Indian (Mœlissa) girl, ten years of age. She had then been three days ill. During the first two days, she had suffered from violent and constant irritation of the stomach, and dysentery. She was under medical treatment, when, "fortunately," an old experienced nurse was called in, and quickly recognized the nature of the disease, and prescribed the specific remedy—strong lemonade for drink, and suppositories of limes, soot, and some other ingredients of no material efficacy. This treatment had been commenced four hours before our author saw the patient, and the symptoms were said to be much mitigated. Her then condition was as follows:—pulse scarcely perceptible—skin cold and clammy—vital powers apparently fast sinking—sphincter ani so relaxed, that a suppository, the size of an egg, was easily introduced. Our author had not the slightest hope of recovery; but not so the nurse. He, therefore, patiently waited the result of the vegetable-acid treatment. To his astonishment the female recovered, though the convalescence was tedious. Our author then made inquiries respecting the nature of the disease; but could gain little other information than that it was a flux, which invariably proved fatal, unles abundance of lemon juice was used, both by the mouth and per anum.

Dr. O'Connor had no good opportunity of seeing the disease again till the year 1823. On the 24th of July he was summoned to the relief of a negro, a robust man of good constitution, about 26 years of age. He had been two days ill, and entered the hospital of Belle Plaine Establishment that morning. Our author had seen him on the 22d., being then in good health, and was quite astonished to perceive the immense emaciation that had taken place in two days. The man was greatly depressed in spirits, and seemed confident that the disease would terminate fatally, as he had neglected the BISCHE, and nothing now could save him. His pulse was 136, and scarcely perceptible, skin cold, and covered with clammy perspiration, countenance dejected, alvine and urinary excretions passing away involuntarily and frequently, the former mixed with blood and mucus. On examination, the sphincter ani was found completely relaxed, and he could compare the anus to nothing else than the sunken eye of a dead animal in an advanced degree of putrefaction. The suppository of lime-juice had been freely used during the preceding twelve hours, without any effect, and the disease was rapidly advancing, the poor man suffering excruciating pain. Our author ordered him half a grain of opium and seven of calomel every four hours, with injections of arrow-root and laudanum, after which, lime-juice suppositories were to be introduced. Brandy-punch for common drink. 25th. Passed a restless night—suffers excruciating pain in the rectum. Has taken 35 grains of calomel and three of opium, besides half an ounce of laudanum in glyster. He refused to take any more medicine, and requested to have a Spanish nurse, in which he was indulged. She gave him lime-juice and some other unimportant things. 26th. The anus has sloughed, and the sphincter is partly destroyed. The nurse had passed more than a pint of lime-juice up

* Medical Observations on a disease known in the Island of Trinidad, by the name of *Bische*, or Biecho. By I. L. O'Connor, M. D. Assistant-Surgeon, Royal Artillery. (Analyzed from a MS. account forwarded to the Editor.)

the rectum, with as much facility as into a funnel. 27th. Is sinking rapidly, and prays for death. From the scrotum to the os coccygis there is only one foul sore, like the face of an ill-conditioned stump after amputation! One could see several inches up into the cavity of the abdomen. Opium gave no relief, and the wretched sufferer was always exclaiming—"I am eaten up by the Bische; and he is so hungry, that he never stops, day or night; and when he stops, he and I die together." He died that night, and the body was examined 26 hours after death. The putrefaction, however, had made such advances that nothing satisfactory could be gleaned from the dissection. There were no worms in the intestines.

The disease is attributed by the natives to an insect which lays its eggs in the rugæ of the rectum when the person evacuates his fæces, and protrudes any part of the mucous membrane, in a woody or jungly spot. Our author has never seen any proof of the existence of this insect, and is more inclined to consider the malady as a species of dysentery commencing in the rectum, and confined to the lower portion of intestine. When taken early, its progress is easily checked, in the same way as gonorrhœa or ophthalmia; but if the disease be once communicated to the cellular structure surrounding the gut, the destructive progress goes on to a fatal termination. It appears principally among the African and Indian races. Our author met with one instance, however, in the person of an English half-pay officer. It was quickly subdued by the application of lime-juice.

In our author's practice in Trinidad, he made a free use of lime-juice, whenever the evacuations were bloody and mucous, and with decided benefit. This practice is adopted by the most experienced practitioners of the colony above-mentioned.

Dr. Ferguson, of Windsor, through whom we received the above curious document, has appended many ingenious and practical remarks, which our limits prevent us from giving at length. He looks upon the disease as a form of malignant dysentery, and asserts that he has seen many instances where the rectum was similarly affected among our soldiers in Flanders, during the campaigns of 1794, and subsequently in various parts of the world. Dr. F. speaks highly of the utility of lime-juice and ripe fruits in dysentery, and mentions that the late Dr. Cabell was so much struck with the efficacy of this class of remedies in Spain, that when severely attacked with dysentery afterwards in Portugal, he rejected all medicine, and trusted his own cure to the abundant use of lemons and oranges. He recovered, and afterwards pursued the same treatment in the hospitals of the British army. We shall conclude this article with the following extract from Dr. Ferguson's comments on the paper of Dr. O'Connor.

"One word respecting the general treatment, and I have done:—which is, that, of all the plans offered for the cure of dysentery, the mercurial is unquestionably the best; not only because through its alterative accumulative powers, it supersedes almost every inflammation that is not too rapid in its course to be overtaken by any but the speediest remedies; (witness the hepatic, the syphilitic, the rheumatic, the iritic, and other inflammations;) but because all the common forms of mercury can be made to coalesce most advantageously with the anodyne, the sudorific, and the depletory auxiliaries; or even with the citric acid through the aid of opium, and still better if the skin be chosen for the medium of its introduction."

Johnson's Journal, for April, 1827.

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2. M. Piorry's Pleximetre.—M. Piorry has announced that, by means of a small pallet of ivory placed on any part of the abdomen or thorax, he has been enabled to turn percussion to a much better account than has yet been done; the sound emitted by the portions thus covered by the ivory pallet, being much clearer and more indicative of the actual state of the parts underneath, than when these parts are stricken by the fingers in the usual way.

M. Piorry has made more than eighty experiments on the living and dead subject, healthy and diseased. By means of this intervention, sound may be elicited from the thorax, even when the integuments are œdematous. The extent of pleuritic effusions may be ascertained with great exactness. Hepatisation, and also a tuberculated condition of the lungs can be more readily detected in this way than by simple percussion. But it is in the abdominal region that the pleximetre promises to be of most service. The extent which any solid organ, as the liver, occupies—that of tumours—watery effusions, &c. may be easily ascertained by the difference of sound on percussion of the tablet instead of the naked parietes. Even the quantity of fluid in the stomach or intestines can be appreciated. The state of the uterus (when pregnant) can be also correctly estimated through the medium of the pleximetre.

If discoveries go on in this manner for half a century more, there will be little occasion for the ancient desideratum—a glass window in the breast—to see what is going on within.—*Ibid.*

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3. Intestinal Ulceration and Hæmorrhage.—For many years past we have been anxiously directing the attention of our brethren to the state of the intestinal canal in fever. We have had but too many opportunities of observing how superficially the examination of bodies is conducted, especially in regard to the mucous membranes—and how often the diseases of these parts are overlooked. The profession is much indebted to Dr. Hewett, of St. George's Hospital, a most able, zealous, and liberal minded physician, for directing the attention of practitioners in this country, to the state of the gastro-intestinal mucous membrane in fever. We are convinced that the more minutely the dissections, in fatal cases of fever, are performed, the more frequently will Dr. Hewett's observations be found correct. We shall now relate some particulars of an interesting case which lately came under our observation, in illustration of these preliminary remarks.

A fine young man, a Law Student, aged about twenty-one years, became affected with common fever in the beginning of December, 1826, and was under the care of Mr. Bampfield of Bedford-street, Covent Garden The fever ran on for more than a month; but convalescence had at length apparently commenced, and the patient's appetite was returning, without any obvious organic affection having been produced by the protracted fever. About the end of the first week in January, 1827, and without any apparent cause, a sudden and extensive hæmorrhage from the bowels took place, and this continued to recur daily for eight days in succession, when the writer of this article was called into consultation. On examination, the pulse was found to be from 90 to 100, and rather weak; the tongue slightly furred in the middle, but red at the tip and sides; skin of natural temperature, and without perspiration; mental faculties clear; respiration natural. The abdomen was carefully examined. There was slight tenderness in some places, but no distinct pain. The abdominal muscles, however, were always tense, whenever the hand was placed on the belly. He had passed in the preceding twenty-four hours about two pints of blood, without any coagula, mixed with watery fluids, but without any fæcal matters or smell. No real fæculence was seen by Mr. Bampfield in the stools for the preceding week; and the patient lost at least twenty or twenty-four ounces of blood daily during that period. Superacetate of lead and opium were given for three or four times, and then a gentle aperient. This made little alteration in the discharge. Two half-drachm doses of oil of turpentine were then given. The first dose came up, the second was retained. For two days, the blood disappeared from the stools, and some traces of fæculence was observed in the liquid motions. The hæmorrhage then returned. After exhibiting various remedies, the hæmorrhage again stopped, or nearly so, for three days, and decided proofs of fæculence were in the motions. It was now fondly

hoped that the danger was over; but in the midst of these promising appearances, the patient was suddenly seized with a great prostration of strength, and died in the course of a few hours—about sixteen days from the commencement of the intestinal hæmorrhage.

The suddenness of the death induced the writer to suppose that ulceration had existed in some part of the intestinal canal, and that perforation of the bowel had taken place, with extravasation of fæcal matters into the general cavity. Part of this prognostication was true, and part was false. On examination, in presence of Mr. Brookes, surgeon, and Mr. Owen, his assistant, a series of ulcerations were found in the ileum, varying in extent from the size of a small split pea to that of a half-crown piece,—and from a slight abrasion of the mucous membrane, to complete destruction of all the coats, except merely a pellicle of peritoneum, through which boundary the ulceration had not passed. The ulcers gradually increased in size and depth as the ileo-cæcal valve was approached, where they occupied nearly the whole circle of gut. There was no ulceration above or below the intestinum ileum.

Now we need hardly say that these ulcerations were formed during the fever, and that from these the hæmorrhage proceeded, when the fever was, in fact, over, and convalescence was apparently commencing. Yet here had been no diarrhœa; no pain complained of in the abdomen, and scarcely any tenderness on pressure, up to the very day of this patient's death. Had the hæmorrhage not taken place, and the patient died, who would have suspected intestinal ulceration? very few we believe. The case offers an instructive lesson; namely, that gastro-enteritic inflammation, and even ulceration, may be going on in fever, without any obvious or well-marked symptom to indicate its existence. A superficial examination of the abdomen, after death, without opening the intestinal canal itself, would not have revealed the true state of things—for in many places where there was serous ulceration of the mucous membrane, there was little alteration in the appearance of the external surface. We hope this example will induce practitioners to suspect the existence of gastro-enteritis in fevers, where the symptoms are equivocal, and to carefully examine the *internal* surface of the alimentary canal where an opportunity is given.

The case was attended, during the latter days of the patient's life, by Mr. Brookes (Mr. Bampfield's successor) in company with the reporter.—*Ibid.*

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4. Extract of Bals. Copaibæ in Gonorrhœa.—Surgeons are well aware that the balsam of copaiba would be often successful in gonorrhœa, if they could prevail on their patients to continue its use for a certain time. But this they rarely can do, from the nauseous taste of the medicine, and its effects on the stomach and bowels. It would be extremely desirable that the article could be deprived of its disagreeable qualities, without injury to its medicinal; and this Mr. Thorn thinks he has done by the preparation of a resinous extract, from which the essential oil, possessing the obnoxious part of the balsam, is separated. The remaining extract is supposed to contain "all the virtues of the copaiba."

Mr. Thorn divides gonorrhœa into three stages—1st, that which occurs within twenty-four hours of the first appearance of the symptoms:—the 2d, is when the inflammatory symptoms are fully established—and the third is, when the inflammation has ceased, the membrane of the urethra being in a state of atony, and the only symptom being a thin mucous discharge.

Medical men have generally been afraid to exhibit the bals. copaib. in the second, or inflammatory stage, and the first stage has often elapsed before they are consulted. It is in the first two stages, that the extract of copaiba has been found most advantageous. Mr. Thorn has related one case where the disease was cured in a couple of days, when the medicine was given in doses of fifteen grains to a scruple thrice daily. In the inflammatory stage, unless there were symptoms indicative of approaching swelled testicle, he

has not hesitated to give the extract in doses of ten or fifteen grains thrice a day. In no case has he found it produce any other effect than that of relieving the scalding, and frequently doing away with this symptom, in a short time. The medicine should, of course, be continued for a few days after all the symptoms are gone. Mr. Thorn very properly combines the depletory treatment and cooling regimen with the exhibition of the medicine.

In the third stage, that of gleet, too often dependent on some alteration of structure in the mucous membrane of the urethra, the extract of copaiba has not proved so useful. Our author speaks favourably of an injection composed of one drachm of extractum tormentillæ to six ounces of water. It has been used with advantage by Mr. Tyrrell, of St. Thomas's Hospital, and also by Mr. Alcock. Several cases have been communicated to our author, and are here published, from Mr. Tyrrel, corroborating the efficacy of the extract of copaiba in gonorrhœa. The medicine is prepared by Philp and Co. 62, Quadrant, Regent-street. We think the surgical profession are indebted to Mr. Thorn for thus early and candidly communicating the results of his experience with the extract of copaiba.—*Ibid.*

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5. Congenital Dislocation of the Hip-Joint.—It is well known that the most frequent kind of dislocation to which the hip-joint is liable is that of the head of the femur upwards and backwards on the dorsum of the ilium. It is also well known that of this dislocation there are two varieties—the first is the result of accident—the second is *consecutive*, the result of scrophulous ulceration in the joint. But M. Dupuytren in the memoir now before us, proposes to add to the list a third variety of this same dislocation, which, as it is found at birth, he terms "congenital."

The signs which characterize it, are shortening of the limb—presence of the head of the femur on the dorsum ileim—prominence (saillie) of the trochanter major(?)—retraction of almost all the muscles of the upper part of the thigh towards the crest of the ileum, where they form around the head of the femur a kind of cone, the base towards the os innominatum, the apex towards the trochanter—the almost entire denudation, in consequence, of the tuber ischii—the rotation of the limb inwards—the obliquity of the thigh proportioned, of course, to the age and development of the pelvis—the meagreness of the limb, out of all proportion to the trunk and upper extremities, which are really well developed—and the imperfect motions, particularly of abduction and rotation. The upper part of the trunk of the persons thus affected is thrown backwards whilst the lumbar portion of the column projects as much forwards; the pelvis is placed almost horizontally on the femurs, and the ball of the feet alone touches the ground. In walking we observe them incline the body strongly towards the limb which is to support the weight, at which moment the head of the femur of that side is seen distinctly to rise on the dorsum ilei, in consequence of the superincumbent weight and sinking of the pelvis, and then they drag painfully forwards the opposite limb, the head of the femur of which is perceived not to rise but to sink in consequence of its own weight drawing it down. This series of phenomena then is repeated each step the patient takes, and although locomotion to him is not so painful as it appears, still he is incapable of making any thing like a long journey.

In the recumbent posture, most of the symptoms of the dislocation in a great measure disappear, in consequence, no doubt, of the relaxation of the muscles and removal of the weight of the trunk. In this position of the body the surgeon can by a slight effort elongate the limb, and shorten it again, that is, he can pull the head of the femur downwards, or press it again upwards to the extent of two or even three inches, according to circumstances.

Let us look to the history of this complaint. Even at birth the prominence of the haunches, the obliquity of the femurs, &c. are perceptible, but in these cases the attention of the parents is seldom much directed to the mal-

formation till the child begins to walk, and indeed even then its aukward efforts are attributed in general to weakness, &c. till the end of the third or fourth year, when the parent is at last convinced there must be something wrong. As the pelvis begins to be developed (for it is a curious fact that the growth of the pelvis is never affected in these patients) the symptoms which we have enumerated above become more marked, especially in females, and a person not acquainted with the true nature of the malady would consider it the consequence of scrophulous disease of the joint. But the previous history, the absence of all pain, swelling, abscess, fistula or cicatrix, and the simultaneous affection of both sides are sufficient to correct this error. At the same time it must be remarked that these individuals are for the most part of a lymphatic and scrophulous habit.

As the age of the person increases, and the superincumbent weight becomes of course greater, the heads of the femurs rise on the dorsum ilei till at last they almost touch the crista, the obliquity of the bones is increased, and the difficulty of motion proceeds at last so far as to incapacitate the patient from all active exercise.

As this of course is not a fatal disease, the opportunities of cultivating its pathology must be comparatively rare. In the cases which he has examined M. Dupuytren has found the acetablum almost entirely obliterated or even entirely wanting; the head of the femur a little flattened on its internal and anterior surface, and a sort of cotyloid cavity to lodge it, formed on the dorsum of the ileum, as happens in unreduced accidental dislocations. In one or two instances, he has seen the ligamentum teres elongated, and in some places worn apparently from the pressure and friction of the head of the femur.

The Baron puts some questions to himself and the reader as to the etiology. He asks, can the dislocation be consecutive to a disease which assailed the fœtus and disappeared before birth? Or can it be the result of an antenatal accident? Or lastly, can it be owing to an original imperfection of the acetabulum; in other words, can it be a congenital malformation? He seems to incline to this position, but like a skilful disputant he has dealt his blows so equally to all his men of straw, that it is almost hard to say which is up or which is down.

M. Dupuytren makes some very sensible remarks on the treatment which of course can be but palliative. As the weight of the trunk is the main agent in aggravating the displacement, repose is obviously indicated; but it is not necessary to confine patients to the recumbent posture; for in the act of sitting there is no stress on the femurs, the body resting entirely on the tuberosities of the ischia. Let these individuals then choose a profession which they can exercise when seated. Our author advises, likewise, the use of the cold bath, and the application of a bandage which encircles the pelvis, confines the trochanters, and keeps them of an uniform height, thus binding the ill-adapted parts together, and preventing that continual motion to which they are exposed. This practice, though it certainly will not cure the complaint, will give a great degree of support to the hip-joints, and prevent the progress of the displacement.

In the course of eighteen years, M. Dupuytren has met with twenty cases of this kind, seventeen or eighteen of which have been females.

There is a plate appended, which shows the character of this congenital dislocation very satisfactorily.—*Ibid.*

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6. Amaurosis cured by long-continued Vomiting.—This curious case is related by Professor Polidoro, of Florence, and the particulars are as follow:—A female, aged 30 years, of pale lymphatic temperament, had experienced, when only seven years old, a long febrile affection, together with convulsions, and paralysis of some of the members. When these phenomena disappeared, there came on a severe pain in the right orbit and neighbouring parts, with

complete blindness of that side, nothing appearing wrong in the coats or humours of the organ. This pain continued till the patient was 20 years of age, when she happened to fall down a flight of stairs. This accident was followed by an abundant discharge of muco-purulent matters from the nostrils, and then the pain in the orbit ceased. In the beginning of Nov. 1825, she began to experience pains, sometimes in one, sometimes in the other side of the head, accompanied by a sense of tension. Towards the end of the same month, the *left* eye became the seat of a very severe pulsating pain, soon followed by blindness of that eye also, so that she could now scarcely discern light from darkness. Blood-letting, local and general, was several times practised, together with blisters, &c. but no relief had been obtained. On the 9th December, Professor Polidoro examined the patient attentively, and nothing particular could be observed in the state of the eyes, except dilatation of the pupils, with insensibility to the brightest light, blindness, squinting, and a pale corneous spot at the bottom of the right eye. She refused to have a seton, but took a grain of tartar-emetic in eight ounces of the infusum arnicæ montanæ. 11*th*. Two grains of the tartrite were given in the same vehicle—vomiting induced. 12*th*. The same medicine, and the same effect. Some vision in the *left* eye. 13*th*. The same medicine. After vomiting, she experienced a tensive pain at the bottom of the orbits. Liquid stools followed the vomiting. 14*th*. Same treatment. She could now see to thread a needle with the left eye. The same medicine was continued. 17*th*. She begins to have some slight vision with the *right* eye, which had been blind for more than 20 years. The nitrate is continued, but does not produce vomiting. 19*th*. The dose is increased to three grains of the tartrite daily. 20*th*. Several vomitings by this last dose. She can distinguish some objects faintly by means of the right eye alone. 24*th*. She could now read with the *left* eye, and could distinguish letters of a certain size with the *right*, but not in their proper place. 25*th*. The pupils contracted to their natural size, and were obedient to light. The patient less frequently vomited than before. 26*th*. She could see the buttons on a person's coat with the right eye, and the sight of the left was nearly as good as ever. She now demanded permission to go from the hospital, and she was discharged towards the end of February, 1826. She has since been seen, and continues to preserve her sight.—*Journ. Complem. Nov.* 1826.

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Sciatica cured by Turpentine.—In the November Révue Medicale, M. Piorry has stated a case of severe femoro-popliteal neuralgia, cured by the medicine at the head of this article.

Madam A——, aged 40 years, had been harassed with violent pains, of a lancinating character, shooting from the pelvis along the thigh, in the direction of the sciatic nerve, and down even to the foot, ever since the month of February, 1826. The pains were increased by the slightest movement, and they were unaccompanied by any visible change in the colour, size, or temperature of the parts. The respiratory and digestive functions were healthy; but an evening access of fever obtained, and terminated in a profuse perspiration in the night. The pains were exasperated during the evening accession. This series of symptoms continued for six months, and resisted the various means that were employed by her physicians. She came under M. Piorry's care on the sixth August. He applied 40 leeches in the line of the sciatic nerve; the part was enveloped in a large cataplasm; and baths were afterwards administered. Diluent drinks and low diet were enjoined. A slight amelioration ensued, and the leeches were twice repeated. Still the amendment was very inconsiderable, and, indeed, the third application of the leeches exasperated, rather than soothed the pains. The extract of lettuce was then employed, in full doses, but with only temporary benefit. On the first September a large blister was applied, which caused the pain to cease entirely for a time, again to be renewed with equal violence

The oil of turpentine, in the dose of one drachm thrice a day, was given, suspended in syrup and water, by means of yolk of egg. The medicine produced heat at the epigastrium, but no vomiting the first day. The second day it vomited the patient, and the dose was given only twice a day. The patient could feel that turpentine remained long on the stomach, and it took away the appetite. On the third day the neuralgia was mitigated, and in four days it was quite dissipated, there only remaining a sense of formication, which also disappeared in a day or two more. The patient thought herself cured; began to walk about her room; and left off the medicine. The pains returned, though in a slight degree, and the turpentine was resumed for a few days more, when the recovery was complete.—*Rev. Med.*

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8. Obliteration of the Aorta.—A woman named Cabret, thirty-six years of age, and of a good constitution, had always enjoyed excellent health until six years ago, when she observed in the anterior and lower part of the arm, between the elbow and wrist, a moveable but not painful tumour, of the size of a hazel-nut, which gradually increased to that of an egg, and became the seat of violent shooting pains. After having in vain employed different means, the tumour was removed with the knife, by M. Dupuytren, in 1821, and healed very speedily; but returned soon after, and was then excised by M. Dubois. The healing of the wound seemed at first to proceed rapidly; but granulations occurring, recourse was had to arsenic paste, and the healing was accomplished in a few months. On the 24th of July, 1824, this woman felt some shooting pains a little above the old cicatrix, and soon after had some slight fits of coughing, attended with constriction in the chest but without expectoration or any particular pain. The catamenia continued regular. She applied no remedy, only took less food. In the month of October the cough became violent, her breathing shorter; she was seized with paroxysms of suffocation; her appetite diminished, and sleep deserted her. She was ordered pectoral ptisans and opiates, but her sufferings increased. Towards the latter end of November, she was ordered saffron pills; and from that moment the symptoms acquired much intensity.

She was removed to the hospital of St. Côme on the ninth of December. Her appearance differed little from a state of health; her tongue was white and moist; she had but little thirst, never any fever; her respiration was slow, short, and difficult. On percussion, her chest sounded much. The stethoscope (*le cylindre,*) showed that the air entered freely into the lungs. On the fore-arm there was a fixed tumour, unattended by pain, or by alteration in the skin. M. Bougon, the kings surgeon, thought there was cancer in the lungs, and prognosticated accordingly. The suffocating fits and the dry cough went on increasing, particularly towards night; the pulse remained calm; the abdomen was soft, and not tender.

On the eleventh of January, 1825, the lower extremities appeared to be paralysed, and the patient died, though still somewhat corpulent.

The body was examined thirty hours after death. There was found—

1st. A scirrhous swelling forming one mass within the radius, half an inch above the scar left by the second operation; tubercles of the same kind in the thyroid gland, and between the muscular fibres of the right thigh.

2d. Cancerous depositions in the tissue of the heart, and between the ribs and the pleura. In all points of both lungs were numberless hard round bodies, the largest not exceeding the size of a small hen's egg. Some appeared scirrhous; others, in great number, had the character of a brain-like substance. Stony, calcareous masses occupied the mesentery: others, of a medullary nature, the omentum. Scirrhous and cancerous tubercles were beneath the mucous membrane of the stomach, of the duodenum, of the small intestines, of the gall-bladder; likewise in the kidneys and the pancreas; while the liver appeared to be gorged with them.

3d. In the interior of the vena cava, a cylinder of a greenish colour, and of a fibrous texture; one of its branches having a cancerous appearance.

4th. From the third lumbar vertebræ, *the aorta was filled with a cylinder of a yellowish gray colour,* in which was observed a small quantity of puriform matter. *In the common and external iliacs, a substance offering most of the characters of old coagula.* The contexture of the vessels was not altered. *All the arteries proceeding from the aorta above the obliterated point were free, and of greater amplitude than usual.*

5th. Two tubercles, of the same kind with those of the other organs, on the internal surface of the dura mater. A third, of the size of a walnut, within the right occipital fossa, the pressure of which had produced absorption of the bone.

M. Velpeau, the senior clinical professor, considers this as one of the most interesting cases that can be stated, to show—1st, the alteration of the fluids in disease; 2dly, the possibility of obliterating the aorta, without producing the death of the lower limbs; 3dly, the diathesis or general disposition, known by the appellation "cancerous disposition;" 4thly, the origin of cancer from other than inflammatory causes.

Journal of the Medical Society of Tours.

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9 Remarkable Case of Triple Dentition.—Elizabeth, wife of Dominique Morelli, healthy, and always having enjoyed good health, with the exception of tooth-aches, (for which she was, each time she had them, obliged to lose blood, sometimes repeatedly) She was mother of four infants. In one attack of toothach, towards the middle of the month of March, 1821, after having suffered very much from the two last molares of the left side; she had them drawn. However, towards the end of October of the same year, extremely sharp pains preceded the cutting of two new teeth, which replaced those removed. In January, 1826, these new teeth becoming loose, and causing much pain, were removed also: they were white and beautiful, without any appearances of caries.

July, 16th, M. Aimonino, who relates the case, was consulted by Madame Morelli, who complained of intolerable pains, and had an inflammatory tooth-ache. Antiphlogistics and depletions were tried, without success; and, on the 18th, the patient discovered that a third supply of these two teeth was about to make its appearance; accordingly they soon protruded through the gums, when the pains ceased.—(*Repert. Med. Chirur. &c. de Torino.*)

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10. Mercurial Frictions in Puerperal Peritonitis.—M. Velpeau, in a Memoir, published in the Revue Medcale, after deploring the inefficacy of our remedial treatment of puerperal peritonitis, proposes, as a means of cure, mercurial frictions on the belly. He orders two drachms of mercurial ointment to be rubbed in on the surface of the abdomen, and repeated every two hours. Much depends on the regularity with which this is done. After two or three frictions, should the symptoms not be ameliorating, he has the belly anointed with oil, and washed with soap and water, and the frictions recommenced. One would at first expect that the acute pain felt by patients in the abdomen would prevent the use of frictions: he says, that pain is not in the skin of the abdomen, but in the inner side of the muscles of the parietes; and therefore, that very gentle frictions with the hand of a person tenderly interested in the fate of the patient, does not increase the suffering, and, after being done once or twice, the pain is so much relieved that more freedom can be used. "It is wonderful (he says) how much more of the mercurial unguent may be made to pass into the general mass of fluids in this way, than when frictions on the thighs are used." With regard to the length to which these frictions may be carried, he thinks they should be continued some time after marks of salivation have shown themselves. It is necessary that the patient be kept in a temperature considerably elevated,

and carefully guarded against cold currents of air. As to the mercury, it is evident, he says, that it acts, first, in modifying the nature of the fluids, and, by consequence, the state of the inflamed surfaces. He draws the following conclusions:

1st. That puerperal peritonitis, when well established, and left to itself, is almost always fatal. 2d. That it is still to be proved that, in this state, sanguineous depletions are a sufficient remedy. 3d. That it is incontestible, according to the observations of Hamilton, Gordon, and M. Vandenzende, that, by the aid of calomel in large doses, many women affected with this disease have been saved. 4th. That mercurial frictions made on the abdomen, frequently repeated, promise great success, and deserve to attract the attention of practitioners. 5th. That, by the aid of these, patients, who have had one foot in the grave, have been saved; and that, therefore, they ought to be used in any stage of the disease, however late. 6th. That they can be continued with great safety till the mouth shows itself to be affected. 7th. That it will be useful to add to their use that of baths, calomel, and an elevated temperature. 8th. That the facts observed by him, although not sufficiently numerous to produce conviction, yet may encourage practitioners, to renew the trials. 9th. In fine, that mercurial preparations have the property of sometimes curing puerperal peritonitis, when well marked, but that, to discover the best mode of administering them, we must wait for farther experience.—*Rev. Med.*

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11. Method of avoiding Amputation of the Penis in Cases of Cancer.—In the Report of the Clinique de la Pitié, by M. E. Margot, an account is given of a method that M. Lisfranc follows, to discover to what degree of depth cancer of the penis extends, and whether the diseased parts may not be completely removed without amputating the penis.

M. L., in his clinical lecture, in showing a patient with cancer of the penis, took the opportunity of saying that he would put in execution an idea that he had long entertained, and which had been suggested to him from minute examination of some amputated cancerous penes. "I have seen (says he,) penes enlarged to twice their natural size, and with all the symptoms of occult or ulcerated cancer: every thing announced that this frightful disease completely occupied the organ. They have been removed, and, on minute examination, the disease has been seen to be confined to the corpora cavernosa." How are we to know that such is the case? There is but one way: it consists in making, on the dorsum of the penis, parallel to the axis of that organ, an incision, which, beginning at the anterior part of the cancerous point, shall be continued to the posterior. The bistoury must be used with much caution and slowness, and, as the incision goes on, the parts must be cleaned with a sponge; and, the extent of the disease being discovered, a careful dissection of the diseased parts may save the penis. The only inconvenience resulting from this operation is the prolongation of the sufferings of the patient.—M. Lisfranc has twice put in practice this operation, and each time saved the member. (*Rev. Med.*)

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12. Case of obstinate Epistaxis.—A young man, aged nineteen, was attacked with bleeding at the nose, which lasted two days, and was so abundant that he several times fainted. Mineral acids, ice to the back of the neck, the inspiration of cold vinegar, and other means, failed to arrest the bleeding. Dr. Brunner, who was sent for on the third day, caused powdered gum arabic to be blown through a quill up the nostrils, and the hæmorrhage ceased.—*Hufeland's Journal.*

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13. Extirpation of the Parotid Gland.—J. Prevost, aged sixty years, was received into hospital, on the 1st of June, 1826, on account of

a fibrous tumour, the size of a man's fist, occupying the region of the parotid gland, and extending beyond that in several directions. Although the tumour was moveable in some directions, it was fixed in others, showing that its roots penetrated deep, and were adherent to the neighbouring bones. After a few days of proper regimen, the operation was performed, in La Pitie, on the 5th June. We need not detail the steps of the operation with any degree of minuteness—since the same process will rarely be applicable to two cases. After elliptical incisions had been made, so as to embrace the tumour, and some dissection had been gone into around it, during which several vessels were divided, it was attempted to insulate the disease by the fingers and by the handle of the scalpel; but this was found to be quite impracticable, on account of the number and strength of the ligamentous attachments to the surrounding parts. The surgeon was therefore obliged to have recourse to the knife. A tedious, painful, difficult, and dangerous dissection ensued, but was ultimately crowned with complete success, in the removal of the whole of the diseased parts, including the parotid gland. Some of the attachments went to the transverse processes of the first two cervical vertebræ, and to the stylo-mastoid process. The carotid artery was completely insulated for some space, and no sign of pulsation could be seen or felt, unless the artery was compressed between the fingers, when the rush of blood through the vessel, at each systole of the heart, communicated the sensation to which the term pulse has been applied. One attachment of the tumour was to the condyle of the lower jaw, and others insinuated themselves between the pterygoid muscles. These were all carefully separated; and in this part of the dissection, a large and powerful column of blood sprang to the height of several feet from the bottom of the wound! It was overcome by pressure. The operation was continued amidst appalling hemorrhage, by which the patient was for a time deprived of sense. After he had revived a little, M. Lisfranc kept pressure on the internal maxillary artery, which was divided, while he proceeded to tye, seriatim, the temporal, transverse fascial, auricular, and mastoid arteries. The internal maxillary (ou la terminaison de la carotide externe) remained to be secured. With equal difficulty and dexterity, this intrepid surgeon seized and tied this great vessel, amidst deluges of blood; and the operation was finished. The wound was dressed, and the patient put to bed. We need not follow the diurnal reports of the case afterwards. The patient went on remarkably well till the 27th of the same month, the wound gradually filling up. At this time, whether from diatetic error or other cause, erysipelas of the face took place, attended with vomiting and diarrhœa. Amongst matters thrown up were some preserved cherries. Fever now became developed, and there were evident symptoms of abdominal inflammation. This last was conquered by numerous leeches; the suppuration went on kindly; and the wound was healing fast. On the 2d July a relapse took place, and some blood appeared in the stools. After various vacillations, during which the erysipelas appeared and disappeared several times, a colliquative diarrhœa came on, and could not be suppressed. He was carried off by this complaint on the 16th July, six weeks after the operation.

On dissection, the mucous membrane was found inflamed throughout its whole extent, and several large ulcerations were discovered, some of which had penetrated through the muscular and peritoneal coats, and caused extravasation of the intestinal matters into the general cavity of the abdomen. This, of course, was the cause of death. The preparation of the extirpated tumour, including the whole of the parotid gland, was presented to the Academy of Surgery, and there examined by numberous members, who verified the statement of the extirpation. The examination of the part where the operation had been performed, corroborated also the truth of the details already given. It is evident that, as far as the operation was con-

cerned, the surgeon was successful. If he could not control the gastro-enteritic inflammation and ulceration that supervened, there was no blame attached to the surgery of the case.*—*Revue Medicale, Dec.* 1826.

MEDICAL INTELLIGENCE.

HOSPITAL REPORTS.

1. In a late number of his valuable journal, Dr. Johnson prefaces an offer of a premium, consisting of a set of his journal, for the best quarterly report, with the following remarks. "Our readers are aware that, in almost all the public hospitals of Paris, some distinguished ELEVE INTERNE is deputed by each physician or surgeon, to draw up a quarterly report of the diseases, to be published in some of the various medical journals of the French metropolis. This procedure is productive of many advantages. In the first place, the public at large are incalculably benefited—in the second place, the medical officers of the hospitals are fairly represented, and their practice made widely known—in the third place, the pupil, who thus reports, is stimulated to acute and careful observation of the phenomena of disease, his mind is strengthened by exercise, his accuracy is guarranteed by the responsibility attached to the undertaking, and he is thus early introduced to public notice, and favourably so, if his reports are ably drawn up."

As we consider these remarks equally correct and valuable; the practice, one which ought to be introduced into our country; and willing to encourage such an undertaking, we hereby offer (adopting the plan of Dr. Johnson) to

STUDENTS OF MEDICINE,

A complete set of the Medical Recorder, commencing with 1822, and a continuation of the journal, free of expense, for two years, with a perpetual registery of the names of the successful candidates, together with their preceptor's names, in a permanent list set apart for that purpose, and kept standing in a conspicuous part of the journal, for the BEST quarterly report, which may be sent us, from any of the large hospitals in the United States. As Dr. Johnson says, "the prize is small, in pecuniary value, but the testimony of merit will be thus placed in a more conspicuous point of view than has ever yet been done."

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2. PRIZE ESSAYS.

Believing that good essays on the articles of our indigenous materia medica, embracing their practical application &c. would be useful and interesting to our patrons, we offer a premium of fifty dollars for the best dissertation on this subject.—Candidates will please to have their essays delivered at the publication office of the Medical Recorder, previous to the last day of January, 1828, with a sealed note enclosing the name, &c. It will be expected that good drawings are to be furnished by the candidates if required, in which case, plates shall be executed.

The examiners shall be gentlemen who understand the subject well, and the unsuccessful essays will be returned on application.—Should this attempt to give the indigenous materia medica of our country succeed, we intend to continue the premiums.

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3. Charles Byrne, M. D, U. S. Arsenal near Baltimore, has communicated to us, an interesting case of fistulous communication between the vagina, bladder, and rectum, produced by the long-continued pressure of the child's head at the superior strait, during labour. At the end of forty hours, the

* This account of the extirpation of the parotid by the distinguished surgeon of la Pitié, strengthens our *suspicions* respecting a case adverted to in our last number, page 444.—EDS.

child was delivered dead, "and bore all the marks of severe compression; the bones of the cranium were firmly united, and would not yield to the strongest pressure between the hands."

The patient died about six weeks after delivery, and no opportunity for examination *post mortem*, was afforded.

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4. "A Manual of Chemistry, on the basis of Professor Brande's, containing the principal facts of the science, arranged in the order in which they are discussed and illustrated in the Lectures at Harvard University, N. E. compiled from the works of Brande, Henry, Berzelius, Thompson, and others. Designed as a text book for the use of students, and persons attending lectures on chemistry. By JOHN W. WEBSTER, M. D, Lecturer on Chemistry, in Harvard University, Boston. Published by Richardson and Lord. 1826."

THE work, the title of which is announced above, is a compilation from various sources, and is highly creditable to the industry of Dr. Webster. It appears to us to contain all that is really valuable to students; to whom we strongly recommend it. For greater convenience it is furnished with both a general and marginal index. For further information respecting it, we must refer to the following advertisement appended to the work.

"ADVERTISEMENT.

"The basis of this work is the excellent Manual of Professor Brande; it contains all the strictly chemical part of that work, with numerous additions from the best writers on chemistry. All that part of Professor Brande's work which relates to mineralogy and geology has been omitted, its place being supplied by more ample directions for the practical student. In most cases the extracts from other writers have been given without any alteration, except where it was demanded in order to give a greater degree of uniformity to the phraseology. The extracts are designated by the first letter of the writer's name, and copious references are given for the convenience of those who may wish to consult the original memoirs.

"As it was a leading object in the compilation of this volume to put into the hands of students a less expensive work than that of Brande or Henry, and at the same time to compress as much matter as possible into one volume, many of the less important substances and several instruments have been described in the form of notes.

"The plates will be found to contain nearly all the figures contained in the volumes of Brande and Henry, with the addition of several from other sources, the whole presenting a more complete chemical apparatus than is to be found in any chemical work, with the exception perhaps of Thenard's *Traite*.

"This volume being designed as an elementary treatise for students, the tables usually found in works on chemistry, have been omitted, but will be published in a separate volume, together with selections of the most instructive analyses which are contained in the Essays of Klaproth and the various scientific journals.

"The experiments of Mr. Farraday on the Liquefaction of the Gases, were omitted in the body of the work, with the view of presenting them in connection with any new experiments of which intelligence might be received while the sheets were passing through the press.

"Mr. Brande's Pharmacy not having been received till this work was nearly ready for publication, the compiler was able to avail himself of but a few of the statements contained in that valuable treatise.

"To the gentlemen who have aided the compiler by their advice and assistance, especially Professors Silliman and Cleveland, and Samuel Moore, Esq. director of the United States Mint, he begs leave thus publicly to express his obligations.

"*Cambridge, June*, 1826."

5. A new Medical work, entitled, PATHOLOGY and THERAPEUTICS, by John E. Cooke, M. D., lecturer on the practice of Medicine in the medical school, Winchester, Virginia, is in the press, and will soon be published.

We have seen a part of this interesting work, (upwards of 500 pages,) and from a cursory examination of its pages, we have little doubt but that it will reflect credit upon the author, and be a valuable addition to the medical literature of our country.

Dr. Cooke is already advantageously known to the majority of our subscribers, as the author of the prize essay on epidemic fevers, published in our number for July, 1824; an essay which is viewed, both in this country and in Europe, as one of the best productions of our country.

The work is well printed, on good paper, and will be comprised in two volumes octavo, of from 500 to 600 pages each. The price will be about six dollars, bound, and will be ready for delivery early the ensuing fall. Orders for it, will be received at the publication office of the Medical Recorder, or by the Agents of said work.

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6. GREGORY'S PRACTICE OF PHYSIC.

This valuable work has lately been republished in this city, by Messrs. Towar and Hogan, with considerable additions, in the form of notes, appendix, and plates by Professor Potter, and Samuel Colhoun, M. D.

Any commendation of this work, would be almost superfluous; in the language of Professor P., "its own intrinsic worth is its best eulogy." The author has presented his work in the most interesting garb, by combining the etiology, pathology, and symptomatology, in the series of cause and effect. This scheme has been executed with so much felicity, in so small a compass, that it becomes a real treasure to both preceptor and pupil. The former finds his experience confirmed, and the latter has only to dig, to find a mine more precious than gold or silver."

The American editors, in adding another valuable work to our stock of medical literature; have presented it in such a form, as to render it doubly interesting to the American practitioner, by adapting it to the practice of this country.

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7. HIGH OPERATION FOR STONE.—We understand that this operation has lately been successfully performed on a boy 8 years old, by Abraham Carpenter, of Lancaster, (assisted by Drs. Muhlenburg and Moore.)

We mention this case, inasmuch as this operation is not generally approved of; we have heard of but three cases in which it has been performed in this country, two of which proved unsuccessful. Notwithstanding, we have been informed that an "enterprising young surgeon of this city," has stated that he had frequently performed this operation, and in every case with success; no doubt he meant his success was on the *dead subject*.

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8. Dr. Thomas W. Smith, of Fauquier county, Virginia, in a letter to the editors, states the result of an extensive practice of Midwifery of some years.

From the period at which he commenced keeping a register of his cases, they afford the following varieties of the presentations, according to Baudeloques division.

1st.	Position of the head, -	172	Brought up - - - 290
2d.	do. of do. - -	84	1st. Position of the breach - 5
3d.	do. of do. - -	10	2d. do. of do. - 2
4th.	do. of do. - -	8	3d. do. of do. - 1
5th.	do. of do. - -	9	Arm presentations - 2
6th.	do. of do. - -	6	
1st.	do. of the face, -	1	Total 300
	Carried up -	290	

Of the above number, one only was delivered with the forceps, and three with the scissors and crochet.

9. Extract of a letter from Dr. Musser Lampetre, Pennsylvania, to the Editors.

"I have applied Amesbury's Apparatus, in both simple and compound fractures of the lower extremities to the number of eight cases; and in one case of non-union of the left os femoris; this case was interesting. Mathias Hestler ætat 30, whilst labouring under chronic hepatitis, had his left thigh bone fractured by a fall from a horse. Thirteen weeks after the accident, union had not taken place, when Amesbury's apparatus was applied; in a few days, with the aid of an assistant, he was enabled to walk about on crutches, and at the end of about eight or nine weeks, the bone was firmly united, and the apparatus removed from a leg nearly as sound as ever.

"I shall content myself by simply stating, that complete success attended its application in every case in which I have employed it."

10. At the annual meeting of the convention of the Medical Society of Connecticut, at Hartford, May 9th, 1827, the following gentlemen were elected officers for the ensuing year.

Eli Todd, M. D., President; Hon. John S. Peters, M. D., Lieutenant Governor of Connecticut, Vice-President; William Buel, M. D., Treasurer; Samuel B. Woodside, M. D., Secretary.

The following gentlemen were elected by the Society, examiners of the Medical Institution of Yale College.

Eli Todd, M. D., &c., Elijah Middlebrook, M. D., Silas Fuller, M. D., Thomas Miner, M. D.

11. MEDICAL SOCIETY OF NEW-YORK.

The Annual Meeting of the Medical Society of the State of New-York was held at the Capitol, in the City of Albany, pursuant of the statute, on Tuesday, the 6th February, 1827. The following Delegates were present:

T. Romeyn Beck, Vice-President Albany; Platt Williams, Secretary Albany; Jonathan Eights, Treasurer, Albany; Laurens Hull Oneida; Joshua Converse, Schoharie; James Stevenson, Washington; Peter Wendell, Albany; William Bay, Albany; Elial T. Foote, Chataque; Delos White, Otsego; John McCleland, Columbia; Henry Van Hovenburgh, Ulster; Truman B. Hicks, Warren; Harvey W. Doolittle, Herkimer, James McNaughton, Col. Phys. and Surgery Western District; Charles D. Townsend, Albany; Samuel Osborn, New-York; Thomas G. Evans, Orange; Daniel Ayres, Montgomery; Moses Hale, Rensselaer; Asa Lee Davidson, Allegany; Enos Barnes, Yates; Thomas Spencer, Madison; Miles Stevenson, Clinton; Alexander McIntire, Wayne; Joshua W. Bowron, West-Chester.

The following gentlemen were chosen officers for the ensuing year:—

Dr. T. Romeyn Beck, Present; Dr. Laurens Hull, Vice-President; Dr. Platt Williams, Secretary; Dr. Jonathan Eights, Treasurer and Librarian.

CENSORS.

Southern District.—Dr. Felix Pascalis, Dr. James R. Manley, Dr. Samuel Osborn.

Middle District.—Dr. Charles D. Townsend, Dr. William Bay, Dr. Peter Wendell.

Eastern District.—Dr. John H. Steel, Dr. James Stevenson, Dr. Daniel Ayres.

Western District.—Dr. Luther Guiteau, Dr. Alexander Coventry, Dr. Thomas Spencer.

COMMITTEE OF CORRESPONDENCE.

Dr. Harvey W. Doolittle, Dr. John B. Beck, Dr. Henry Van Hovenburgh, Dr. John McClelland, Dr. Thomas G. Evans, Dr. Delos White, Dr Truman B. Hicks.

COMMITTEE OF PRIZE QUESTIONS AND DISSERTATIONS.

Dr. John B. Beck, Dr. James McNaughton, Dr. Jonathan Eights, Dr. T. Romeyn Beck, Dr. James R. Manly.

PERMANENT MEMBERS.

Dr. Elial T. Foote, of Chatauque, Dr. J. C. Cheeseman, New York.

HONORARY MEMBERS.

Dr. Joseph Lovell, Surgeon-General, Washington; Dr. John Onderdonk, President New-York County Medical Society.

The prize questions of $50 each for 1828, are,

1st. The Nature of Goitre, showing in what section of the United States it prevails, and by what atmospheric or topographical influence that affection is aggravated, and by what remedies it can best be relieved or cured.

2d. The History, Causes, and Cure of Scrofula, with particular reference to its prevalence and prevention in this state.

The Dissertations to be sent to the Secretary, on or before the first of January, 1828.

LIST OF MEDICAL GRADUATES, 1827.

12. Berkshire Medical Institution.

Prosper M. Armstrong, Hæmoptysis—Nathan Boyd, Erysipelas—Phineas R. Cooley, Apoplexy—Charles R. Ferguson, Purulent Ophthalmia—C. Sydney Goodrich, Sternalgia—Aaron Green, Cynanche Maligna—Charles W. Hamilton, reciprocal influence of animal and organic life, in reference to disease—William B. Hart, Inflammation and Fever—James M. Hunter, Intermittent Fever—Moses A. Lee, Structure and Functions of the Skin—Elijah Park, Dysentery—Henry P. Phillips, Inflammation—Alonzo Platt, Influenza—Peter Schermerhorn, Pertussis—Martin Spear, Vulnus ex ustione factum—Alonzo Streeter, Hydrocephalitis—Stephen M. Tibbits, Structure and Functions of the Liver—Edward Turner, Pleurisy—Comfort I. Ward, Mercury—Eben Warner, Intermittent Fever.

13. Yale College.

M. A. Andrews, Otis Ambercombie, A. M. Manley Peters, Arza Andrews, Henry Bronson, Charles R. Cooper, Albert F. Roberts, George Dyer, Jonathan P. Fay, Christopher E. Hill, Norman Landon, John Miller, Burr Noyes, Horatio Thompson, Peter De St. Croix, Justis Sherwood, Jarvis J. Smith Gershom Wells, Mason F. Sanford.

14. University of the State of New-York.

College of Physicians and Surgeons of New York.—John A. Anderson, Digitalis—Amasa Barrett, Mental Despondency—Eneas S. Condit, Cataract—James E. Cornell, Amaurosis—James H. Dickson, A. B., the Physiology of the Spleen—William H. Herbert, A. B., the Pathology of Fever—Theodore F. King, A. M., Typhus Fever—John B. Loring, the Colchicum Autumnale—Alfred C. Post, A. B., Temperaments—Alexis Smith, the Topography, Climate, and Diseases of Otsego County—Charles McKnight Smith, Purulent Ophthalmia—Charles S. Tripler, the Irritative Fever of Drunkenness.

The honorary degree of Doctor of Medicine was conferred on the following gentlemen:—Dr. John Onderdonk, of New-York—Dr. Jonathan Eights, of Albany—Dr. Laurens Hull, of Oneida—Dr. Thomas Fuller, of Otsego—Dr. James Stevenson, of Washington—Dr. Gain Robinson, of Wayne.

College of Physicians and Surgeons of the Western District.—Walker L. Bean,

of South Carolina, the Functions and Sympathies of the Liver—Chauncey D. Bull, of Saratoga county, New-York, the Effects of Light—Archibald Catlin, of Herkimer county, Hypochondriasis—Amherst Childs, jun. of Seneca county, Antimony—Meriwether L. Cobbs, of Virginia, Chronic Hepatitis—William J. Delavan, of Seneca county, Croup—Jesse Day, of Monroe county, Syphilis—Stephen Gay, of Vermont, Dysentery—John Gorrie, of South Carolina, Neuralgia—Charles C. Haddock, of Erie, county, Cholera—Jacob Jimison, of Erie county, the Customs, Habits, and Diseases of the Seneca tribe of Indians—Moses Johnson of Herkimer county, the Epidemic Fever of 1826, as it prevailed in Salisbury and Fairfield, Herkimer county—James Lawrence, of Saratoga county, Phthisis, Pulmonalis—Dyer Loomis, of Montgomery county, the Effects of Difficult Dentition—Finlay M'Martin of Saratoga county, Uterine Hæmorrhage—Peter P. Murphy, of Montgomery, county, the Influence of the Mind on the Body—William W. Nugent, of Albany county Croup—Noyes Palmer, of Onondago county, the Phenomena and Treatment of Old Age—Calvin Preston, jun. of Oneida county, Hydrocephlus—John S. Spalding, of Montgomery, the Theory of Menstruation—Peter Sherwood, of Herkimer county, Prussic Acid—Abraham H. Slauson, of Rensselaer county, Inflammation—Abraham Snyder, of Herkimer county, Hooping Cough—Nehemiah Stebbins, of Vermont, Fungus Hæmatodes—John H. Wheeler, of Greene county, the Influence of the Skin over the Internal Organs.

15. University of Pennsylvania.

Pennsylvania.

Benjamin I. Wiestling, Pneumonia Biliosa—Charles Frederick Beck—Laryngitis—Charles H. Mathews, Trachitis—Allen Knight, Cholera Infantum—Edward Swain Cholera Infantum—Frederick A. Fickardt, Intermittent and Remittent Fevers of Bethlehem, during the years of 1823-4-5 & '6—Samuel A. Barton, Hydrocephalus Internus—Silas E. Potts, Bilious Fever—Watson P. Trego, Strictures of the Urethra—John P. Heister, Indigestion—Charles Noble, on the Vacuity of the Arteries after Death—William Thomas M'Clurg, Pleuritis and Empyema—Mordecai Lawrence, Jr., Hepatitis—Morris Lancaster, Hydrocephalus Internus—Jacob S. Zorns, Influence of the Passions on the Human System—Abraham Rex, Pleuritis—Roger Davis, Mania a Potu—Thomas Jackson, Worms and Anthelmintic Medicines—Charles Merrick, Arthritis—John M. Bernhisel, Apoplexy—Thomas Forrest Ash, on the Use of Blood-letting as a preventive of Inflammation in wounded Joints—James Culbertson, on Diarrhœa—Charles Shoemaker, Intermittent Fever—Isaac Z. Coffman, Acute Hepatitis—Jenkin S. Evans, Hepatitis—Wilmon Whilldin, Jr. Croup—Lewis Rodman, Cholera Infantum—John F. Whitehill, Dysentery—Lewis Summerl, Rubeola—James Darrah, Dysentery—John R. Knox, Dyspepsia—Samuel A. Houston, Acute Rheumatism—Ephraim M. Blaine, Cynanche Trachealis.

Virginia.

George Thrift, Cholera Infantum—George Feild, Congestive form of Fever—John Edmunds Nicholson, Hydrocephalus Acutus—William Briggs, Bilious Fever—James Lewis Wydown, Dyspepsia—Joel Watkins, Hydrothorax—George Penn, Hæmoptysis—Robert H. Turnbull, Syphilis—Hobson O. Whitelaw, Hepatitis Acuta—Robert E. Peyton, the Art of PreservinHealth—Philip R. Triplett, Amenorrhœa—Joel Watkins Dupuy, Indigestion—Benjamin W. Maclin, Pneumonia Biliosa—William Powell Haynes, Medical Chemistry and its importance to the Physician—Theodorick Bland, Bilious Fever of Virginia—Nicholas L. Thomas, Phlegmasia Dolens—George Jefferson, Typhus Fever—Robert Harrison, Acute Hepatitis—Izard Bacon Rice, Caloric—William T. W. Taliaferro, Dysentery—Peyton Short Cocke, Puerperal Fever—Thomas P. Bagwell, Hypochondriasis—John P. Hardaway, Tetanus—William Lewis, on that species of Uterine Hæmorrhage called Accidental, occurring during Pregnancy—John I. O'Sullivan, Dyspepsia—

Thomas C. Gordon, Gonorrhœa Virulenta—Samuel W. Vaughan, Croup—Joseph Mosby, Vital Principle—William F. Gaines, Asthma—Charles H. Boyd, Influenza—Wilson J. Drish, Croup—Albert G. Smith, Phlegmasia Dolensns Samuel B. Richardson, Lithotomy—William C. Anderson, Phlegmasia Dole——Zachariah Talley, Dysentery—William D. Baldwin, Bilious Colic—Cyrus M'Cormick, Bilious Fever as it occurred in the Valley of Virginia—Daniel Bedinger, Ergot—John Singleton Belt, Rheumatism—Thomas Johnson Auscultation and Percussion—Henry May, Pneumonia Biliosa—Robert Randolph Turner, Dysentery—Bernard Nollner, Conjunctival Ophthalmy—John R. Taylor, Pneumonia Typhoides.

Maryland.

Richard Henry Thomas, Mania a Potu—John Wood, Idiopathic Dyspepsia—Joseph Ford Shaw, Acute Rheumatism—Frederick Wessels, Tests for Arsenic.

New Jersey.

Albert Sargeant, Cynanche Trachealis—Joshua Whitall, Remittent Fever—John B. Zabreskie, Absorption—Benjamin H. Stratton, Puerperal Convulsions—Samuel Woolston, Treatment of Dysentery—William W. Day, Hernia.

Delaware.

Robert Montgomery Bird, Phthisis Pulmonalis—E. Bivins Wootten, Poison from Opium—Peregrine Brown Battell, Podagra or Gout—William H. Bonwell, Fracture of the Os Femoris—Isaac Mitchell Price, Hæmoptysis—Alexander Lowber, Typhus Fever—Lewis Springer, Phthisis Pulmonalis.

District of Columbia.

Benjamin M. Brocchus, the Vermifuge Powers of Cedar Apple—Sidney W. Smith, Hydrocephalus Acutus—James C. Hall, Physiology of the Brain and Nerves—Joseph Mechlin, Jr. Traumatic Tetanus—Thomas Gardiner, Remarks on Mercury.

North Carolina.

Josiah R. Horn, Pneumonia Biliosa—Henry M'Aden, Physiological Action of Narcotics—Robert Cannon Bond, Neuralgia—John Rhodes Herndon, Dysmenorrhœa—Samuel M. Southerland, Hæmorrhage—Isaac P. Freeman, Bilious Fever—James Henry Hicks, Scrofula—Fabius I. Haywood, Dyspepsia.

South Carolina.

Joachim R. Saussy, Inflammatory Dropsy—James F. Griffin, Digestion—William E. Huger, Hæmorrhoids—Alfred B. C. Dubose, Non-Mercurial practice in Syphilis—Joseph C. Nott, Costiveness—John S. O'Hear, Hepatitis—Thomas F. Potter, Empyema—L. C. Trezevant, Properties of the Stillingia—Edward T. Lynah, Cancer—Mordecai C. Myers, Trachitis—Samuel Watt Bowie, Emansio Mensium.

Georgia.

Richard T. Sankey, Debility—Henry I. Macon, Catarrhus Epidemicus—George N. Ware, Properties of Cold Water—Elijah Deupree, Functional Derangements of the Liver—James S. Sims, Debility—Amos Ward, Fever.

Alabama.

Edward B. Creagh, Pneumonia—Richard Lee Fearn, Experiments and Observations on Tendons—Pugh Houston, Hydrothorax.

Ohio.

John K. Finley, Influence of Atmospheric Air—Rockefeller Dakin, Vitality.

Tennessee.

William Bonner, Bilious Remittent Fever.

Vermont.

George H. Parker, Scrofula.

16. JEFFERSON COLLEGE.

Pennsylvania.

Abraham Bitner, Typhus—John Cunningham, Fever—Alex. C. Donaldson, Burns—Samuel Endress, Hepatitis—Frederick W. Herbst, Croup—Patrick Kelly—Venous Absorption—Isaac Kline, Intermittent Fever—Charles A. Luzenburg, Scrofula—Thomas J. M'Camant, Uterine Hemorrhage—William McClery, Injuries of the Head—G. Washington Mears, Cirnilifuga—George R. Morton, Bilious Remittent—John S. Murdoch, Cold—Peter Shannon Gonorrhœa—Jacob M. Sherer, Dyspepsia—Jacob G. Shock, Secale Cornutm—Jeremiah B. Stubbs, Dysentery—Lewis P. Thompson, Cholera Infantum—Isaac C. Weidler, Scarlatina—Robert Wray, Dysentery.

Ohio.

Isaac B. Carpenter, Digitalis.

Virginia.

Patrick Cullen, Mania a Potu.

Delaware.

Edward C. Dingle, Gonorrhœa—John Kinsey, Intermittent and Remittent.

Vermont.

Samuel S. Fitch, Contractiliy.

Maine.

David Hale, Hepatitis.

Connecticut.

Russell B. Hubbard, Worms—John W. Russell, Counter-irritants.

New York.

Anson Jones, Ophthalmia—Frederick A. Waldo, Fractures of the Cranium.

Mississippi.

John P. McIntosh, Dyspepsia.

Rhode Island.

Benjamin Nichols, Punctured Wounds.

New Jersey.

Randolph Shotwell, Intermittent Fever—Edmund L. B. Wales, Remittent-Fever and Dysentery.

17. UNIVERSITY OF MARYAND.

Richard G. Ridgely, of Baltimore, Dysentery; William Keerl; do Burns; Samuel H. Lyon, Maryland, Circulation of the Blood; William Coskery Baltimore, De Dementia; John G. Collins, Louisiana, Marsh Miasma; Edward J. Collins, Baltimore, Measles; Richard Toy, do Arsenic; John C. Dorsey, Maryland, Amaurosis; James Davidson, do. Hepatitis; James L. Billingslea, do Indigestion; Samuel Shane, Baltimore, Pneumonia Biliosa; John W. Mountz, Maryland, Phlegmasia alba dolens; Thomas K. Wilson, Charleston, S. C. Pertussis; Van S. Bennett, Virginia, Dysentery; Caleb W. Cloud, Maryland, Hepatitis; William G. Hardy, do. Cholera Morbus, John Gilpin, do. Epidemic Bilious Fever of Elkton; Stephen La Compte, do Phrenitis; Benjamin Watkins, do Enteritis; John W. Eichelberger, do. Dyspepsia; John B. Mudd, do. Hepatitis; Thomas H. Emory, do. Phthisis Pulmonalis; Benjamin Lanier, Virginia, Digitalis Purpurea; William B. Gwinn, Maryland, Bilious Cholic; Henry W. Johnson, Virginia, Icterus; Austin Smith, do Gastritis;

Jesse J. Simkins, do; Scrofula; Griffin W. Holland, do Hydrocephalus Internus; Edward A. Rozee, do. Cholera Infantum; William H. Rider, Maryland, Cephalitis; Robert H. Broadnax, Virginia, Inflammation; James M'Connel, Pennsylvania, Chorea St. Viti; Andrew Annan, Maryland, Suppuration; Samuel H. Rench, do. Hepatitis; Joseph Carr, do. Pneumonia Biliosa; James R. Mitchell, Maryland, Croup; Andrew D. Livingston, Pennsylvania, De Febre Remittente Biliosa; Sidney Evans, Maryland, Dyspepsia; Locke L. Weems, do. Acute Hepatitis; Henry Diffenderffer, Baltimore, Eupatorium perfoliatum; James Hunter, N. Carolina, Hydrophobia; John M. Teacle, Virginia, Dyspepsia; Richard Mechem, Maryland, Dysentery; Isaac Cole, do. Cephalitis; James Johnson, do. Phlegmasia alba dolens puerperarum; Alexander Dugas, Georgia, Nephritis; Samuel Harper, Maryland Ascites; James E. Horsey, do Apoplexy; Anthony Daly, do. Gastritis; F. Hollis Newman, do. Cynanche Trachealis; Dawson Warren, Virginia, Do. do; *Rush Jameson, Baltimore, De malis consequentiis quæ interdum venesectioni succedunt; William Coale, Maryland, Hepatitis: Adolphus Dunan, Baltimore, Dysentery; Anthony W. Prince, do. Intermittent Fever; Francis T. Chevis, Virginia, Ascites Abdominalis; William Brewer, Maryland, Cholica Pictonum; Stephen J. Waters, do. Pertussis; Albert Heaton, Virginia, Cynanche Trachealis; Thomas Heslip, Baltimore, Medical electricity and Galvanism; John Elliott, do. Dysentery, James D. Sutron, Maryland, Ophthalmia; Alfred J. Forman, do. Scarlatina; Henry M. Dowling, Virginia, De Scriptis et ratione scribendi Jacobi Gregory, M. D.; John P. Spindle, Maryland, use of the Spleen; Hamilton Wallace, Pennsylvinia, Tetanus; Walter M. Bayly, Maryland, injuries of the head; J. B. H. W. Clarvoe, do Cholera Infantum; James A. Buchanan, do. Bilious remittent fever; Robert Fulton, do. Physiology of the Liver; John S. Metzger, Pennsylvania, Diarrhœa; Bennet Dowler, Virginia, Mercury; George D. Snyder, Baltimore, Cholera Morbus; Alfred J. Fort, do. Apoplexy; William J. M'Ilhiney, Maryland, Hydrocephalus Internus; Edward J. Alcock, Baltimore, Circulation of the Blood.

At the same time the Degree of Batchelor in Medicine was Conferred on Richard Y. Seldon, of Virginia; William P. Cook, do; James Ligget, Maryland.

18. Columbian College.

Thomas, Evans, of Massachusetts; James Hagan, of Ireland; Henry King, Jr. Maryland; R. Kirkwood, of Maryland; W. L. Wharton, District of Columbia; R. Wheat, Virginia; B. F. Wing, of Massachussetts.

The Honorary Degree of Doctor of Medicine was conferred on Dr. John Spence, of Dumfries, Virginia.

19. Transylvania University.

Kentucky.

W. O. Aldridge, Apoplexy—O. Brown, Hydrophobia—J. Challen, Dislocation of the ankle joint—J. Clarke, Phthisis Dyspeptica—C. G. Cox, the Influence of Atmospheric Vicissitudes—F. D. Chinn, Cynanche Trachealis—J. R. Desha, Epidemic Fever—A. P. Elston, Fever—S. F. Gano, the Ætiology of Hepatic Derangements—E. R. Hollingsworth, Cathartics—S. M. Letcher, Association and Dependence of Function—J. N. M'Dowell, Dependence of Function—S. O. Peyton, Bilious Fever—J. Railey, the Vis Medicatrix Naturæ—B. W. Rhoton, Cholera Infantum—M. S. Shuck, the Injurious Effects of Tight Lacing—J. B. Warren, the Modus Operandi of Morbific Matter—J. W. Wilson, the Influence of the Nervous System on Secretion—J. D. Winston, Injuries of the Integuments of the Head.

Tennessee.

D. F. Brown, the Functions of the Liver—S. P. Jordan, Lues Venera—J. M. Marable, Hydrocele—R. C. K. Martin, the Operation of Morbific and Cu-

* To this gentleman is awarded the Medal of having written the best Latin dissertation.

rative Agents through the Circulation—D. W. Mentlio, Fever—P. F. Norfleet, Functional Derangement of the Liver—J. Orgain, Epilepsy—D. M. Porter, Hernia Humoralis—W. Thomas, Cholera Infantum.

Virginia.

H. Easley, the Physiology of the Spleen—G. Harris, Scrophula—J. H. Jackson, Inflammation—W. C. Jackson, Hydrarthus—J. Lafon, the Bandage—A. R. Preston, Depletion in Inflammatory Fever—J. Simpkins, Hepatitis—J. M. Walker, Chronic Derangement of the Digestive Functions.

South Carolina.

W. Cantrell, the Anatomy of the Internal Organs of Generation—B. W. Earle, the Milk sickness—J. J Hampton, Podagra—J. P. Miller, Cynanche Trachealis—S. Wright, the term Idiopathic.

Alabama.

E. B Adams, the Treatment of Fractures—D. J. Gatewood, Chronic Hepatitis—R. P. Jones, Dyspepsia—H. A. Prout, the Relations of the Mineral, Vegetable and Animal Kingdoms.

Mississippi.

T. J. Catching, the Origin and Termination of the Absorbents—K. McKinny, Uterine Hæmorrhage—W. Lea, Purulent Ophthalmia.

Missouri.

W. S. May, Bilious Fever—P. B. Wilcox, the Pathology and Therapeutics of Dyspepsia.

New York.

H. Graham, the Forces which Circulate the Blood.

North Carolina.

O. B. Irvine, Blenorrhœa.

Louisiana

R. M. Collins, the Ætiology of Fever.

20. Medical College of Ohio*.

At the commencement of this Institution, held at Cincinnati on the 10th of March last, the degree of Doctor of Medicine was conferred on the following young gentlemen, who had written and delivered *Theses.*

Ohio.

Ely Dresbach, Gastro-enteritis—William Doan, Jr. Colica Ileus—Thomas H. Hains, Puerperal Fever—John S. Haller, Cynanche Trachealis—Richard H. Swain, Puerperal Fever—Turner Welch, Venesection in Typhus Fever—James Z. Ellison, Portal Congestion—Joseph Haynes, Dysentery—Thomas Pierce, Peritonitis—Arva Wilson, the Functions of the Liver.

Kentucky.

Robert W. Berton, the causes and phenomena of Idiopathic Fever—Mitchell Overstreet, the Uses and Applications of the Bandage—David B. Sanders, the Causes and Phenomena of Influenza—William H. Terrel, Abortion.

Indiana.

Samuel W. Clarkson, Hygiene.

Mississippi.

Zebulon Smith, Gastritis.

* We correct a mistake made in our last number, in the list of students attending the different Medical Schools.—Eighty-seven students attended the Institution during the last sessions.—EDS.

ADDITIONAL SUBSCRIBERS SINCE OUR LAST.

Maine.

Dr. Moses Mason,
Robert Carr,
E. G. Moore,
—— Humphrey,
William Snow,
Asa Danforth,
Jon. S. Millet,
William Bridgeham,
Philip Bradford,
Jesse W Mighels,
Eleazer Burbank,
Hon. John Grover,
Dr. Abiot Hall, Jr.
C. H. P. McLellan,
Issachar Snell,
Peleg Benson,
Thomas Brigham,
Cyrus Knapp,
Calvin Gorham.

New Hampshire.

Dr. Benjamin F. Hale.

Massachussetts.

Dr. John C. Smith,
Caleb Belcher,
John C. Hayden,
Samuel Molliken,
Hezekiah Eldrige,
Gustavus G. Peck.

New York.

Dr. John Polhamus,
John L. Embree,
F. L. Parmelee,
E. H. S. Holden,
W. H. Boyd,
E. W. Bibby,
T. S. Jackson,
—— Couch,
George Dower,
Thomas Jefferson Jones,
Conyngham Crawford,
Alex M. Montgomery,
Thomas W. Henry,
Gilbert Forbes.

New Jersey.

Dr. James Cross,
Edward Taylor,
—— Bellville.

Pennsylvania.

Dr. Hugh Montgomery,
W. W. Andrews,
Andrew Wills,
George Moore.
David Hunter.

Delaware.

Dr. E. Bevins Wootten,
John D. Perkins,
Cuthbert S. Greene,
John Gilpin.

Maryland.

Dr. W. B. Gwinn,
H. W. Webster,
S. Sharp,
T. A. Roberts,
Alex. C. Draper,
E. Bishop,
Samuel H. Rench.

Virginia.

Dr. Theodorick Bland,
T. Tally,
J. S. Belt,
G. Craghead,
G. Penn,
A. R. Strother,
Bernard Nollners,
I. E. McCluer.

North Carolina.

Dr. T. Macon,
James B. Yellowly.

South Carolina.

Dr. Thomas Lilley.

Georgia.

Dr. T. C. Harvey.

Louisiana.

Dr. George Sharp.

Alabama.

Dr. Dabner Lipscomb.

Tennessee.

Dr. L. V. Greer,
James T. Broyles,
J. C. Kembrough,
Charles H. Stone,
Wyatt Christian,
William A. Walker,
Robert Nicholson,
William T. Baker,
Drs. Wilson & Cook.

Illinois.

Dr. Josiah S. Betts,

Indiana.

Dr. Jesse M. Gillespie.

Ohio.

Dr. Thomas Townsend.

OBITUARY NOTICES.

DIED, at Savannah, Georgia, on the 24th May last, JOHN W. PEACO, M. D., aged 33 years, late Surgeon in the U. S. army, and U. S. Agent for the Colonization Society. He left this city a short time since, to embark from Savannah for Cape Messurado; to resume the duties of his appointment. On his way there he contracted fever, which terminated fatally.

In the death of Dr. Peaco, the U. S. has lost the services of an enterprising and valuable medical officer.

His Brother officers of the Navy on this station unanimously resolved, to wear crape on the left arm for thirty days, in testimony of the high respect they bore the deceased while living.

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DIED, at Warminster, Virginia, on the ninth of October 1826, of diabetes, JOHN WOODS, M. D., aged 34 years. The writer of this short notice, knew the Doctor well, and can truly say, that as a man and as a physician, he was not surpassed by any one in his section of country—as a man, for his correct principles, and his amiable qualities; and as a physician, for his skill and success in the practice of his profession. Dr. W. has left a wife and child, to mourn the early loss of an affectionate husband, and tender Father.

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It becomes our painful duty to record the death of Dr. S. H. BLACK, of Pencander hundred, Delaware; any attempt we might make to eulogize this man would fall so far short of being a description of his merits, that we will only say—as a physician, his fame stood high with all who knew him, and he was adored by those who immediately experienced his attention. As a man he was held in the highest estimation by his fellow citizens; and was called to represent them repeatedly, both in the senate and house of delegates in the State of Delaware. Those stations and many others of public trust, he filled with great ability, and great satisfaction to his constituents. He was a kind husband and a tender parent. He went to New-Ark on Thursday the 19th day of April, in his usual health; for the purpose of witnessing an examination of the students of New-Ark Academy, of which he was a trustee, about noon he became suddenly ill, of apoplexy, and died in the evening, at five o'clock. He has left a widow and children to lament their loss. It may be said of him with propriety, he was a great and honest man.

Elkton Press.

EXTRA-LIMITS.

The following Essay by Dr. Miner, was originally published in a pamphlet form, in consequence of which its circulation has been very limited. We republish it in this department of our Journal, under the full impression that it will be viewed as valuable and interesting by our subscribers, and of importance to the profession generally, in as much as it describes a disease which has spread mortality through several of the New-England States, within a few years; is comparatively little known in other sections of our country; and bears a striking resemblance to the Cholera of India. Dr. Miner has corrected, and made considerable additions to this edition.

TYPHUS SYNCOPALIS,

SINKING TYPHUS,

OR THE

SPOTTED-FEVER OF NEW-ENGLAND,

AS IT APPEARED IN THE EPIDEMIC OF 1823, IN MIDDLETOWN CONNECTICUT.

BY THOMAS MINER, M. D.

"Our knowledge in many branches of Natural History [and Medicine] would be much less imperfect than it is, if many facts had not been suppressed, either from a fear lest they should be thought incredible, or from that unreasonable incredulity which will not, even from the strongest testimony, give credence to any thing that it cannot explain."

"For my own part, I am contented to write faithfully what I have observed, leaving every body afterwards to follow his own way at his peril."

PREFACE.

As far as respects endemic diseases, Middletown, from its first settlement, has been one of the most salubrious stations in the United States; and of the epidemics which, within the last twenty years, have so extensively visited New-England, it remained long exempt. [Except on the Housatonic river, and perhaps a very few places on the sea shore, Connecticut is exempt from intermittents. The principal diseases that have appeared as epidemics, are nervous fever, pneumonia-typhodes, and typhus-syncopalis. From the revolutionary war, till about 1805, the state was generally healthy and free

from typhoid diseases. 1827.] During the last five years, however, it has experienced its full share of sickness, though in comparison of the number and severity of the cases, the degree of mortality has been unusually small; there being about one death in thirty cases, including both the moderate and severe; and about one in fourteen or fifteen, if reference is made to the severe cases only. Except here and there a sporadic case, since 1815 or '16, the fever about to be described is new, and never prevailed in this town as an epidemic, till 1822. That season our fevers assumed a new form, entirely different from regular Typhus, whether of the nervous or the putrid type, and consequently demanded a peculiar variation of practice, especially in the early treatment. New diseases, without any assignable cause, occasionally have appeared in the most salubrious quarters of the globe, and are no argument against the general healthiness of any particular station.

In the year 1823, the disease which is the subject of the following sketch, in a greater or less degree, prevailed in about a dozen towns in this vicinity. It had a common character in all, though in some unimportant circumstances there were considerable variations. In one or two places the proportion of severe cases was much greater than in this town; in others it was much less. The same was the fact with petecchiæ, eruptions, and perhaps, *stinging* heat. The author witnessed, this season, cases of the epidemic in ten or twelve different towns, and noticed that all the patients agreed in the peculiar affections of the brain and nervous system, and especially in their liability to *gastric sinking;* and that much difficulty existed in all, of employing evacuants to any extent. In some of the adjoining towns, a few of the protracted cases, after they had assumed the form of common typhus, tolerated a moderately free purging, and some of the milder bore it in the beginning; but in general, as late as the second or third week, it was necessary to observe great caution in its employment, or an alarming or fatal sinking, or coma, would follow, or the milder cases were converted into obstinate bilious-fevers.

The fevers of the year 1822, as just observed, partook very much of the same character, and were often attended with alarming paroxysms of *subsidentia*, though in general, they were not so strongly marked, as in 1823. The year 1824, except some pneumonia and catarrh in the spring, was uncommonly healthy, till September; yet the scattered cases were of the same diathesis, and suffered much injury from free purging, being generally by that process converted into factitious bilious-fevers, and liable to extreme sinking at a critical period. The last four months of the year, a number of cases occurred, which were attended with as great deficiency of vital power, from the very access of the disease, as any of the preceding season. The cynanche and catarrh, which at the same time were so generally prevalent among children, in the majority were light diseases, though in many instances, they were obstinate, and attended with severe paroxysms of sinking. The same remarks apply to the epidemic catarrh and pneumonia of the first four months of 1825. Petecchiæ have been more common than usual this present summer.

Opportunities have frequently been presented, for observing this proteiform disease under almost every conceivable circumstance. In former years, many cases, in which no medication at all had been employed till the patient was actually dying, came under the inspection of the writer. The effect of almost every kind of treatment has also been carefully noticed.

During the prevalence of any malignant epidemic, there will now and then be a case so rapid, that by the time a physician can be obtained, the patient has sunk below the reach of all medication; and occasionally one is so obstinate as not to yield, though every medicine produces its specific or operative effect; but in general, no severe disease admits of more speedy and certain success than the

malady under consideration, provided the proper means are only employed early, energetically and perseveringly.

In common language, this epidemic has been generally called Typhus, though it varies essentially from all the fevers which have received that appellation by foreign authors. *This confounding of names* has led to much confusion in practice, and it is apprehended, has been the cause of the fatal termination of many cases; the proper treatment being peculiarly different from that of ordinary nervous or putrid fevers. It will be observed however, that the fever under consideration may be blended with almost any other acute disease, and where it prevails, pneumonia, dysentery, or common typhus, or even influenza, will partake very much of the same character, This is exemplified in the unexpected and fatal sinking, which of late years has been so frequent in these diseases, in many parts of our country. [Drs. Danielson and Mann first noticed it at Medfield, Mass., March, 1806. Dr. North has preserved their account of it, in his treatise.]

This disease first appeared as an epidemic, in Massachusetts, in 1806, and there has not probably been a year since, in which it has not existed somewhere in New-England. [Typhus syncopalis has twice spread extensively in Connecticut, [illegible], from 1807 or 8, three or four years; and again, from 1822 till 1827. Within the last two years, it has appeared in several towns on the sea-shore. April, 1827.] In Connecticut it has never prevailed to any extent, nearer than twelve or fifteen miles of the sea-shore.*

It is of much importance in medicine, that the history of such epidemics should be preservd. Hoping that some other pen might be employed, the author has delayed publishing this sketch, though it was compiled more than a year ago. So much time having already elapsed without the appearance of any publication, he was at last suspicious, if he did not communicate to the medical public his remarks, all correct knowledge of the epidemics which have lately prevailed in the central parts of Connecticut, would soon be overlooked or forgotten. Though the author has taken the utmost pains to be precise in his description, and to be minutely exact, and is under much obligation to several of his friends, and more particularly to one of them, for assistance, he is very apprehensive that no correct idea of the nature of this sinking fever, or of the operation of medicine in allaying its symptoms, can be formed by any one, who is not already conversant with the phenomena of malignant diseases. The pernicious effect of free evacuation, and the total inefficiency of ordinary supporting remedies, in ordinary doses, can hardly be realized by any other than an eye-witness.

Unfortunately, the gentleman who has unquestionably practised more in diseases of this description, than any other physician in the State, or probably in the United States, who has witnessed several thousand cases, and is every way pre-eminently qualified for the undertaking, is so entirely occupied in professional and other humane employments, as to allow him no leisure to prepare for the press the results of his extensive observation and experience. He therefore must excuse the dedication of this sketch to him, as of all others, he will be the best judge of the general accuracy of the statement, and of the propriety of the method of treatment.

Eli Todd, M. D. Physician to the Retreat for the Insane, at Hartford, is most respectfully requested to consider this tract as inscribed to him, as an acknowledgment of his very valuable suggestions upon the symptoms and treatment of malignant diseases, and as a sincere, though imperfect testimonial, of his universally acknowledged merits, as a philanthropist, a scholar, and a physician.

Middletown, (*Conn.,*) *July,* 1825. THOMAS MINER.

* For the history of its early appearance, the reader is referred to Dr. North on Spotted Fever, to Dr. Strong's Dissertation, and to Dr. Fish's Dissertation.

SKETCH

OF THE HISTORY OF THE EPIDEMIC OF 1823,

IN MIDDLETOWN, CONNECTICUT.

Between the last of March, and the last of December, 1823, two of the physicians* had the care of more than one hundred and seventy severe cases of fever, in Middletown, Connecticut, which went through their course, and required close and vigilant attendance. They also had the charge of more than a hundred and eighty other cases of the same sort, which, either from original mildness, or prompt treatment, proved to be comparatively slight. The latter class of patients, however, were so much indisposed, as to be unable to attend to their ordinary business, for a period of one or two weeks; though unlike the former, they were not entirely confined to their beds for any considerable time. Out of these cases, being in the whole about three hundred and sixty, twelve died; viz. six adults, and six children. One half of the mortality happened in November. In the succeeding month the epidemic terminated. Persons of all ages, from one year old to seventy, and of both sexes, were the subjects of the disease. It is, perhaps, needless to remark, that the following statement applies more particularly to the severer cases, unless the more moderate are distinctly mentioned.

There were two varieties of attack, the *sudden*, and the *insidious*. The most sudden attacks were the soonest relieved, provided the patients had prompt and appropriate treatment; and under such circumstances, the disease rarely exceeded five or seven days.† In some of the severest cases, the disease arrived at its height on the third day, and under careful management, the patient appeared subsequently to be free from danger. Not one, this year, that was suddenly attacked, died; the recovery, in most instances, being the evident consequence of the promptness and decision of the treatment, and of the necessity which both patients and attendants felt, of following prescriptions scrupulously.

In the insidious cases, the subjects of the disease were affected with the symptoms about to be described, in a mild degree, for a greater or less length of time, and many seemed to labour under a kind of infatuation concerning the malady and existing danger, and were almost invariably inclined, for several days, to ascribe their indisposition to some other cause, than the prevailing epidemic; and if, at the instigation of friends, a physician was called, they could not be induced, without the greatest difficulty, to follow any regular plan of treatment, till violent symptoms occurred, sometimes as early as the third or fifth day, or more commonly, as late as the seventh. A few insidious cases continued two or three weeks, before there was apparent danger.

The whole number of deaths, this year, happened among the set of insi-

* Dr. Edward S. Cone and the author. The patients were principally Dr. Cone's, but the bad cases were mostly visited by the author in consultation. Dr. C. frequently visited thirty patients daily, who were confined to their beds. This will give some idea of the quantum of sickness during the epidemic of 1823.

† In every malignant epidemic, a few instances are liable to occur, in which the vital principle is so immediately extinguished, that the patient is in a moribund state before the physician can be called. A few such were seen in former years, and one or two in 1824. Such apparently hopeless cases, however, should not be forsaken, as the powers of life sometimes rally, after all hope of life has ceased for hours. If patients have been previously *well* supported, they will usually revive after an apparently deadly coma has continued for a great length of time.

dious cases. One of the adults died on the third day; one, on the fifth; one, on the ninth; one, at the end of the second week; one, at the end of the third week; and one, on the fifth week. Besides, in one of these fatal cases, the disease was complicated, at first, with dysentery; in one, with gout; in one, with a chronic hepatic affection; and two had hæmorrhage from the lungs.* The other did not substantially vary from the common insidious cases. Some of the children died at the end of a week; the others, at the end of a fortnight.

A few of the cases were complicated with dysentery; some, with colic; two or three with cholera; some, with cynanche; some, with cough or pneumonia; two or three, with rheumatism; one, with gout; a few, with severe pain, and passive inflammation of some of the extremities. The great majority, however, had no apparent local affection, except of the brain, and of the parts that more directly sympathize with that organ.

During the prevalence of this epidemic, chronic diseases nearly disappeared, and when they did exist, their acute paroxysms were invariably blended with the prevailing epidemic. For eight or nine months, it was difficult to find a case of acute disease, that did not partake of the epidemic constitution, under whatever head it might be nosologically classed. Not more than two or three cases were, this season, attended with petecchiæ. In one of these, they were very dark and prominent. A marbled skin, efflorescences, and eruptions, appeared in many instances †

In nearly every instance, whether severe or moderate, the disease began with more or less pain in the head, especially about the forehead. Vertigo was also a symptom almost universal. In some, a sudden faintness, dizziness, or sense of extreme exhaustion, so that the patient could neither sit nor stand upright, was the first symptom. In others, the attack resembled a severe concussion of the brain, or a sudden stroke of palsy or apoplexy. Indeed, every thing seemed to show that *the brain or nervous system were the primary seat of the disease.*

In almost every case, the skin was preternaturally cool, for several of the first days, and subsequently, in temperature, *it never exceeded the standard of health*, in more than three or four cases.‡ Even after it had been warmed by internal and external heat, in conjunction with stimulants, it was ever liable to become *partially* cold, as about the thighs, knees, legs, arms, hands, and feet. In the course of the disease, more especially in the worst cases,

* Hemorrhage from the lungs, or rather the free discharge of a *frothy matter of a pink colour*, or of a mucus tinged with blood, without pain or scarcely any cough, is one of the most fatal symptoms that can occur; yet it may be the first, and only cause of alarm to the bystanders.

† The author has seen carbuncles two or three inches in diameter, in the latter stages of this disease, and also has known the carbuncle to be the earliest symptom that was noticed. Swelling of the parotid glands, phlyctænæ, vibices, petecchia, ecchymoses, &c. occasionally occur. A few cases began with extreme pain and passive inflammation in the extremities. Pestilential buboes are almost the only conceivable external affection that is not occasionally met with in these epidemics. It is quite unfortunate that a single symptom, (petecchiæ,) and one too, which is wanting in a great majority of the cases, should have been seized upon, to give the odious and deceptive name of Spotted fever, as that name has been applied by European writers, to a very different kind of fever. Indeed, petecchiæ may appear in diseases of a very different character; and often in porphyra hæmorrhagica, sea-scurvy, and other chronic complants which are unattended with fever. Small vesicular eruptions, attended with troublesome itching, have been very common in all our late epidemics.

Cold Plague is a very exceptionable name for the diseases which have no perceptible stage of reaction. Swift says words are things. (1827.)

‡ Nothing is more fallacious than the statements of nurses concerning heat. The true standard is that of a healthy person lying comfortable in bed. Those who are about the sick, and interrupted in their sleep, have often cold hands, which are very sensible to the least change, or even to no change of temperature in the patient. The same remarks will often apply to the hands of the physician. In what is called *stinging heat*, the real temperature is perhaps most frequently below the healthy standard. Transient flashes of heat with a flushed countenance, are however, common in some of these epidemics. [Respectable writers mention the head being so hot as to require the application of ice. Such cases have rarely or never occurred in our late epidemics, and most probably belonged to a different kind of typhus. Blistering the head, not unfrequently, three or four times in protracted cases seems to be the best application in our disease. (1827.) However, as it so often blends with other diseases, some cases may be complicated with hot typhus.]

it was almost always so much benumbed, as to be insensible to an ordinary pinch or scratch, and while in this state, incapable of being affected by common sinapisms and blisters. This numbness was sometimes most prominent in one side, or even in one leg or arm. In the latter stage, however, there sometimes occurred periods of extreme susceptibility to the impression of rubefacients and epispastics; but as a general rule, external applications, of ordinary strength, would produce very little effect, till something like reaction had been effected. Complete agues or rigors, this year, were very rare in any stage of the disease. Commonly, through the whole course of the disease, the surface, though not dry or husky, was seldom much inclined to spontaneous moisture.* In a few instances, however, there was a morbid, drenching perspiration. Sometimes, though rarely, the patient would complain of a general sensation of heat, though, to the feel of the attendants, he would be actually cold. Is not the heat, which has been often said to occur in some epidemics of this disease, either a transient flush, or the *calor mordax*, the stinging sensation merely, and not the actual augmentation of thermometrical temperature? *If increased heat, and increased frequency of the pulse, are a part of the definition of fever, a great majority of the cases had no fever at all, but were merely an acute neurosis.* At this day, however, it is well known that these symptoms are often absent in irregular pyrexia.†

The countenance, in most of the severe cases, had a kind of leaden hue, with marks of anguish. In some, there were patches of a bright flush, intermingled with other patches that were preternaturally pale. In a few cases, the pupils of the eyes were contracted, and in a few, dilated. In some cases, the organs of sight and hearing were irritable in the extreme; in others, they were equally torpid.

There were two prominent varieties of the tongue, the contracted and pointed, and the dilated and flabby. The fur of the tongue assumed every possible deviation from health, and was of every conceivable variety, except that it never had the appearance which is usually found in synocha. In the course of the disease, red tongue was rather more frequent than any other. Two uncommon varieties of fur sometimes occurred, one of which was a greenish slime, and the other a mucus, varying in appearance, from moist brown sugar, to light coloured molasses. The former was rare; the latter, more common. Most of these varieties of tongue were liable to sudden changes in the same patient. In some of the protracted cases, there were aphthæ. A black tongue seldom appeared, and two or three instances of it only were noticed. On the whole, the state of the tongue was of very little service in diagnosis, or prognosis. In general, there was little or no thirst; but sometimes it was urgent. In such cases it was generally aggravated by cold water, and palliated or removed by a persevering use of aromatics or alcohol.

The stomach, on the one hand, was usually as torpid and inactive as a leathern bag, so that in many instances, the patient would choose scalding hot liquids, or on the other, it was irritable in the extreme.‡ The change from one to the other of these extremes, was generally sudden, and occasioned by slight causes, or took place without any assignable cause. In the majority of the severe cases of sudden attack, unless the violence of the disease was immediately subdued by very energetic practice, torpor prevailed for the first two days; but for the succeeding three or five, the irritability would be so extreme, that without the nicest and most careful manage-

* In 1824, the patients were very frequently inclined to sweating two or three times every twenty-four hours. Cold sweats during paroxysms of sinking are not a rare occurrence.

† In some of the most deadly forms of the disease, there is very little apparent derangement of the functions of the skin, tongue, alimentary canal, or pulse, except during the daily paroxysms of *sinking*.

‡ The distinction between extreme irritability and extreme torpor, is well illustrated in cynanche, when in some cases, capsicum is the best, and the most grateful topical application; in others, it seems to set the throat on fire. Strangury, excited by Cantharides, will occasionally very much increase irritability, though in torpid cases, it is a very valuable counteraction.

ment, vomiting or retching would be incessant. The matter ejected, generally consisted of little more than the drink, or secreted mucus. In a few instances, it was greenish; in a very few, dark coloured. Though in some instances this vomiting was very troublesome, yet there was never any bile evacuated, except in two or three patients that had long laboured under a chronic hepatic disease, or except as the consequence of an ill-timed emetic or cathartic.* Indeed, the vomiting or nausea, in this disease, seemed ordinarily, to be entirely symptomatic of an affection of the brain, or was obviously the effect of an emetic or cathartic, *the sympathies being the reverse of sick headach.* This was evinced by its being excited by raising or moving the head, or by placing the patient in an erect posture, and relieved by a recumbent position; and especially, by blisters to the forehead, temples, and more particularly, to the vertex. Blisters to the region of the stomach alone, though of some service, produced much less effect in relieving this symptom.

With the exception of the few cases that commenced with diarrhœa, cholera, or dysentery, the bowels were naturally torpid † Ischury, from mere torpor of the bladder, was much more common than in other low typhoid diseases. There was a profuse discharge of urine in a few cases. In general, in common with ordinary low typhus of the *nervous type*, there was nothing peculiar in the appearance of this excretion. Indeed, the excretions were never more offensive, and usually much less so, through the whole course of the disease, than in health; and the alimentary canal was not disturbed by any thing which it contained *naturally.* The eructations and dejections of air had no peculiar, disagreeable odour, there was no fetor of the breath, and in all stages, as well at the bed side of the dying, as at the access of the disease, *there was no febrile smell.* A cadaverous smell has rarely been perceived, except in a few of the fatal cases of some years, a few hours before death.‡

The condition of the brain, in this disease, was usually very similar to that state which is produced by exposure to carbonic acid gas, or which is occasioned by excessive doses of some preparations of lead, or of certain essential oils, or of active and pure narcotics. In many cases it resembled concussion, or apoplexy, or palsy. In all the severe, and in a majority of the mild cases, there was from the very access, before a particle of medicine had been taken, *a peculiar deficiency of vital energy in the brain, and the whole nervous system,* so that raising the patient into an erect posture, would generally produce the same sort of vertigo, anxiety at the stomach, acceleration and irregularity of the pulse, nausea, and even fainting, which result from a similar position after a great loss of blood. In almost every instance, the patient was much more comfortable when the head was *low;* and much inconvenience, and even danger, was almost invariably occasioned from any other than a horizontal posture.§

* It is the easiest thing imaginable to convert almost any fever of the *nervous* type, which is not so low as to sink immediately under evacuations, into a bilious fever, with irritable stomach, tympanitic abdomen, diarrhœa, or hemorrhage, by injudicious emetics and cathartics. [Almost all the fevers of Connecticut, for the last ten years, belong to the class that was formerly called *nervous*, in distinction from *putrid.* Though these two types occasionally run into each other, they are usually very distinct and admit of a considerable variation of treatment. 1827.] Indeed, the bilious fevers of this region, which are seen at the present day, are almost *universally factitious*, being the obvious result of hyper emesis or hyper-catharsis, in originally nervous fevers, or in mild spotted fevers.

† Within the last two years three or four cases have been met with, which if they had occurred on the eastern continent, would unquestionably have been considered as genuine specimens of the Spasmodic Cholera of India. They all recovered under the use of opium, the hot bath, and external stimulants.

‡ In a few cases, there was a slight mercurial fetor, which, with the effluvia from blisters, sinapisms, &c., might possibly be mistaken for the ordinary febrile smell; but generally, the air appeared to be completely free from the least unpleasant taint.

§ Exceptions to the danger of an erect posture sometimes occur, though they are very few in this disease; but in one case, the patient could not lie down, without feeling as if his feet were in the air, and his body hanging from them with the head downwards. He was very speedily relieved by shaving his head and blistering it freely.

The mind was more or less affected in every severe case. In the majority of such cases, after the patient was induced to apply for medical advice, there was a morbid fear, entirely independent of any existing urgency or danger of symptoms, and of any information respecting sickness and death in the vicinity. The public were not panic-struck, as the deaths were so few as to cause very little alarm.* Fear, therefore, was rarely a predisposing or exciting cause in this town, though it evidently was in some of the adjoining. In some cases there was a morbid clearness of intellect, attended with incessant loquacity, or there was too great watchfulness, and extreme restlessness; both of which states were always, sooner or later, followed by delirium or coma.† Nearly every case of delirium alternated with coma, but every case of coma was not attended with delirium. In some cases, the delirium resembled intoxication; in many, hysteria; and in others, it was of the low muttering kind, such as is common in ordinary low fevers. In some few cases, there was no other delirium than what was manifested by a false estimate of the disease, the patient, when in the greatest danger, instead of showing any signs of fear or apprehension, insisting that he was but slightly sick. In most cases which received early and judicious medication, delirium did not occur to any extent.

Except where there are convulsions, or, in a very few instances, where something like maniacal exertion appears, or when the fever counterfeits delirium-tremens, the affection of the brain in this disease, (unlike many head-affections in pneumonia typhodes, and common typhus,) rarely produces any increased muscular strength; but, on the contrary, it usually occasions great languor, and inability for muscular exertion, which is more especially manifested when the patient is in an erect posture. As has been before observed, this debility was a kind of paralysis, and appeared to arise from a partial extinction of the vital principle, more resembling the effect of excessive doses of the active and pure narcotics, or of a sudden and violent concussion of the brain, than the exhaustion of the latter stages of common fever. The exhaustion or deficiency of *vital energy*, in both cases, appears to be the same, and the same proportion of the living principle is extinguished; only, at the end of protracted fevers, there is a great waste of the solids and fluids of the body, which must be repaired before much muscular strength is acquired.

In many of the severe cases, the patient on going to sleep, would fall into a state resembling incubus, with difficult or partially suspended respiration, which would require his being awaked as often as once every five minutes; and some could not be allowed to sleep longer at one time for several days, without their spontaneously waking in the most excruciating fright and distress, and finding themselves greatly exhausted.

During the progress of the epidemic, every variety of pulse occurred, except the *strong* and *hard*, and this often in the same patient. In many of the mild cases, and in most of the others, till the period of fatal sinking, it was

* When it is generally known, that only one in twenty five or thirty dies, of those who labour under this disease if it is properly managed, it will be divested of most of its terrors. Besides, when it is recollected, that even the majority of these fatal cases fall a sacrifice to their rashly tampering with emetics or cathartics themselves, before a physician is called, the sense of danger will still be vastly lessened. No severe disease is so much under the control of medication, in the great majority of cases, as typhus-syncopalis, if it is only taken in season, and managed with judgment and decision. Without the advice of a physician, no medication ought to be attempted in cases of sudden attack, except warming the patient with external heat and stimulating applications and giving him freely to drink hot aromatic infusions, such as sage, penny-royal or mint. In the insidious cases, or under predisposition, two teaspoon-fuls of compound tincture of the bark in half a glass of wine, four times a day, is proper treatment, if a physician cannot be procured. From the best calculation, when this disease, in 1823, prevailed the most, there never was, at one time, more than one person in a hundred of the population, that was sick, generally, not one person in a hundred and fifty. The largeness of the number was owing to the regular continuance of the disease in some part or other of the town, and to the regular succession of cases for eight or nine months. [The e is, however, a much greater mortality in some years, than in 1823. In the severest epidemic that the writer has seen, in this town, one patient in ten or twelve died.]

† The symptom of *morbid clearness of intellect*, is perhaps more dangerous than delirium. It was very common in the fever of 1824, and continued till nearly the last of several fatal cases.

rarely so frequent as in health; but towards the close of life, in several of the fatal cases, it was a hundred and twenty or thirty, and occasionally, a hundred and sixty in a minute. In less than twelve hours, it would sometimes vary in frequency from forty to a hundred and thirty. In one instance, it was as slow as twenty-seven beats in a minute, and in six or eight hours varied to a hundred and thirty. This patient recovered so rapidly, that he was able to ride out in a week from his first attack. After the disease was fairly formed, whether it was moderate or severe, an erect or sitting posture would almost uniformly accelerate the pulse forty or fifty beats in a minute, and sometimes double its frequency, besides producing considerable irregularity. In a very few cases, the pulse was a hundred and twenty at the very first attack. The pulse alone, (as is the case with the tongue,) is a very deceptive guide in this fever. At various times in the course of this disease, and even in the dying, it would occasionally give a delusive feel of fulness and force, that often deceived the very best judges respecting the danger, unless attention was particularly directed to other symptoms.* In such circumstances, in former epidemics, bleeding has been seriously proposed by a counsellor, while the attending physician knew the patient to be actually *in articulo mortis*. In other epidemics, in which this disease was mistaken for active inflammation of the brain, or for apoplexy, when the patient has been bled, death has ensued before the ligature could be taken from the arm.† In most of the worst cases, the circulation was daily so languid by turns, that the extremities had a livid appearance and were often nearly pulseless. One patient at least recovered, that was without pulse at the wrist for several hours. Some of the fatal cases were attended with a very distressing palpitation of the heart. Visible throbbing of the carotid arteries was very common, especially in the fatal cases.

A very prominent symptom, which occurred in some degree in almost every instance, even of the mild cases, and probably without an exception in all the severe, and happened in every stage, sometimes constituting the first access of the disease, consisted of paroxysms of *subsidentia*, or a death like *sinking* sensation in the epigastrium, that was described, sometimes as extreme distress, sometimes as a painful sense of vacuity and faintness, sometimes as trembling or fluttering, sometimes as real pain and anguish, and at others, was declared to be utterly indescribable. During the existence of these paroxysms, the coolness and numbness of the skin, the lividness of the extremities, the feebleness of the pulse, and the indications of distress in the countenance, were much augmented. Sometimes, these paroxysms of sinking, were attended with palpitation, and often with spasms; though spasms, tremors, and subsultus were not uncommon in every stage. In the mild cases, these paroxysms of sinking occurred *regularly* in the morning; but in the severest, they were not confined to any particular hour of the day. Singultus was extremely rare, as also was indurated, inflated, or tympanitic abdomen.‡

* It was curious to see how completely strangers were liable to be deceived by the pulse. In many of the worst cases, except during the paroxysms of sinking, or when the patient was dying, and in some instances, in both of these states, judging from this symptom alone, no disease would be inferred to exist. Counsellors, unless *they stay by the patient twenty four hours*, almost always judge incorrectly of the danger. Though a bad state of the skin, pulse, and tongue, are always unfavourable, yet it cannot be too often enforced, that a state of these functions, nearly natural, often exists in the worst cases of this epidemic.

† It would be easy to state a number of cases which sunk from bleeding, when the disease first appeared in this state, and was mistaken for active phrenitis. They are facts of universal notoriety. The author has known repeatedly of venesection in the milder forms of these epidemics; but it not only produced paroxysms of sinking, but rendered the cases obstinate and protracted. In every severe case *free* bleeding, as also *free* vomiting and purging, is almost certain death. Notwithstanding the immediate hazard of bleeding, where it does not directly destroy life it is much less injurious than free purging. Active cathartics have proved more fatal in typhus syncopalis, than all the other kinds of injudicious practice put together. (1827.)

‡ The symptoms of tumid abdomen and hemorrhage were more common in 1824. But it must be recollected that free purging was more common, as the cases were not generally so *immediately* sinking in the first stage. *Tumid abdomen* in fevers, most probably, *is always caused by excessive purging, or spontaneous diarrhœa, not seasonably checked.*

In many of those cases which were neglected, or treated with evacuants, or in which the early symptoms were not decisively and fully met and subdued by appropriate remedies, a peculiar and somewhat different, and usually irreparable sinking and exhaustion occurred *after a critical effort*, or in lieu of a crisis, on the third, fifth, or more commonly, on the seventh day. In a few cases, it did not occur till the end of the second or third week. Under such circumstances, in addition to the sinking in common with other cases, the respiration was interrupted and peculiar, and much resembled that of the dying, or rather that of animals (as is described) after a division of the *par vagum*, the inspirations occurring only at intervals of several seconds, and being usually long and full, while the expirations were so short, that the breath was parted with instantaneously. This *critical* sinking, in combination with morbid respiration, was often the first warning of danger to the patients and attendants, in the insidious cases, and it was almost invariably irremediable; for, although every symptom could be met, for a time, to the full extent, and although the most decided operative effects of medicine could be produced, and life often be prolonged for days, yet the weight of the disease could rarely be lessened, and, in one of the succeeding critical efforts, the same symptoms would almost inevitably prove fatal. In other fatal cases, the disease terminated in a deadly coma. Paroxysms of coma were periodical in some instances, as were those of sinking in others. The former description of sinking and anxiety, which was principally referred to the epigastrium, in distinction from the *critical*, may be termed *ordinary* sinking. It was usually relieved when taken in season, and treated with energy.*

* It is necessary to make further comment upon the two kinds of *subsidentia*, or sinking, or l'*abattement*, as it is called by the French, as they are but little understood, and can *never* be realized by those who have not witnessed this disease in its severest form. *Gastric sinking* is the diagnostic symptom of typhus syncopalis, and is common to *every* case, where it is not disguised by coma, delirium, or prompt treatment. It also belongs to Good's cardialgia-syncopalis (or syncoptica) and is a variety of the *anxiety*, *anguish*, or *distress*, which all writers mention as belonging to the *last* stage of fevers. It appears at *any* stage in typhus syncopalis. (1827.) These sinkings are so common, as to be properly reckoned among the diagnostics of ordinary cases. These symptoms have been the cause of much of the applause, and much of the reproach, that have prevailed, concerning what is usually called *the stimulating practice*. The objections have almost uniformly come from those who have had little or no experience of the disease in its worst and most sinking varieties. In the paroxysms of *ordinary* subsidentia, the patient is sure to find relief by an efficient use of aromatic drinks, essential oils, alcohol, ether, or opium, assisted by external stimulants; and in the more urgent cases, *there is no other mode of relief*. The patient must use them freely, or he sinks for ever. The author is confident, that no instance of recovery from this disease, in the severest form, can be produced under an opposite method of treatment. In the more obstinate paroxysms, the quantities of some of these articles, that are not only borne with impunity, but that are imperatively demanded, are incredible to a stranger to such sinking cases. Every patient feels, and every bystander sees, their salutary effect. It is necessary to *keep up* this effect by the same articles *regularly and frequently administered*, though in much less doses than during the paroxysm, which may prevent its return in any alarming degree. In moderate cases, those fits of sinking when left to themselves, do not at first, destroy life, but each succeeding one reduces the vital powers so much, that a paroxysm of *critical* sinking soon supervenes, that instantly jeopards life. When this critical sinking does occur, the most decided practice is necessary to prevent instant death; and in defiance of every exertion, in the majority of cases, it is believed, it finally proves fatal. Life may usually be prolonged for hours, and sometimes days and weeks, but the system has received such a shock, that ultimate recovery is rarely to be expected. However, it is always our duty to support the patient as long as possible; and we succeed often enough in producing a new secretion of vital power, to prove, that desperate cases should never be neglected, and at the same time, to demonstrate the salutary effects of medicine in palliating, even when it cannot remove disease. Those who are ignorant of the extreme malignity of the disease, in general attribute death in those cases to the medication. If a physician suffers his patient to die in one of these paroxysms, he loses no reputation; but if with the most exquisite skill and judgment, he prolongs life for days or weeks, and the case finally fails, he is almost sure of being censured for his practice. When sporadic cases of this fever first occur, they are generally mortal, and the patient is usually said to *die of a fit* of apoplexy, of angina-pectoris, of hydrothorax, of organic affection of the heart, or of some such fatal disease. He does often die, before sufficient reaction is produced to show that he laboured under a febrile disease. No fever requires greater nicety in adapting the treatment to the symptoms of individual cases than this, as some of them are *very slight*, and require only *moderate practice*. The charge of indiscriminate practice is utterly groundless, and the general inference that is attempted to be drawn from *particular* cases, is entirely unwarranted. From a conversation of a few minutes with any intelligent physician, it is easy to ascertain, whether he has ever witnessed the *whole* progress of a very malignant epidemic. If he has not, or has only superficially viewed sporadic cases, or if he has only seen the disease in its mildest form, or in the intervals of the paroxysms of

Hæmorrhages were rare in this disease; but when they did occur, they were mostly fatal. One case of a child which died on the seventh day, was attended with symptoms of Chorea. One or two cases were seen that resembled delirium-tremens.* Many had most of the usual symptoms of hydrocephalus-internus. Several retained their habitual relish for strong tea, snuff, and tobacco, through the whole course of the disease. Milk-porridge, or broth, was the food that generally sat easiest on the stomach. In a few cases, there was a strong disposition to eat heartily of solid animal food. In those in which this appetite was moderately indulged, it seemed to digest properly; at any rate, it produced no sort of inconvenience.

In opposition to ordinary fevers, in this disease the symptoms were generally much more urgent and severe in the morning, than in the afternoon or evening; that is, the patient was most dangerous during the remission. The reaction of the exacerbation in the afternoon, though it did not reach the standard of health, and could not even be considered as reaction at all in common fevers, made the patient comparatively easy. When there was a resolution of the disease at its outset, a relapse would infallibly supervene suddenly, upon any considerable irregularity of diet, exercise, etc. within the first week; but when the disease had once run its course, there were very few relapses during convalescence. There were several repeated attacks, after the most perfect recovery; and several of the patients had had the disease the preceding year.† Critical periods were most prominently observed. When a case was protracted longer than five or seven days, as in the last stage of almost every acute fever, the disease appeared, *though still more liable to severe and fatal sinking at the critical periods*, not very unlike common low typhus, in which delirium, tremors, subsultus, coma and sinking occur; and was not easily distinguished from it, especially by counsellors, who could not witness its whole course.

The treatment, as respects *degree*, was almost as various as the number of cases; but it was alike in *kind*, in all; and there was abundant evidence, of the necessity of *avoiding every thing that might waste the vital powers*. This was more especially the fact, with respect to evacuations, which, if copious, *invariably* rendered the mild cases severe, and the severe ones, fatal. Probably more than three-fourths of the fatal cases were the consequence of spontaneous or factitious purging or vomiting. Emetics did not answer at all, as the mildest would almost inevitably produce incessant vomiting, which, if not controlled by very large doses of opium, or by great quantities of Lau-

sinking, *all his analogies will fail him.* How a patient can sink irretrievably, sometimes on the first day of his disease, from a single emetic, cathartic, venesection, or enema, or even a draught of *cold* water, when at the same time, he might probably have been restored under proper treatment, is utterly incomprehensible, to most of such as have not *repeatedly* witnessed their effects. And on the other hand, it is equally mysterious, how doses of medicine, that in ordinary cases might endanger life, may be given with the utmost safety, and the most prominent advantage. It is equally incredible, that some cases may be trusted a week without the bowels being moved, and not only so, but that the slightest ecoprotic, if it could be made to operate, might destroy life. The fact that *coma and other typhoid affections of the brain, are more surely relieved by opium than any other remedy*, is equally incomprehensible. However, no facts in medicine are better known by the truly experienced, or are supported by more substantial testimony. The insusceptibility to the action of medicine in ordinary doses, in sinking typhus, compares with the same state in cholera of India and tetanus more than in ordinary fevers. In delirium tremens, a patient of professor B. of B. in one night, took a pound and a half of tincture of opium, and recovered!!! The author states this from very accurate information.

* Several cases occurred in 1824, that counterfeited delirium tremens. It very frequently assumes this form in intemperate people.

† In 1824, two women were delivered, one of them of a dead child, during a severe attack of this disease. The mothers, and the living child, ultimately did well. Several gravid women passed through the disease, in both seasons, without its producing abortion. Several infants, of a few weeks old, have had sinking typhus, within the last two years. [It attacks people of all ages, and has prevailed as an epidemic in every month of the year. The usual law of epidemics is often reversed; for this disease is sometimes mild and manageable on its first appearance, till of a sudden it changes its character, and becomes as malignant as the plague. it is, however, apt to blend itself with the diseases of particular seasons, and to be modified by them; as with pneumonia, cholera, dysentery, or cynanche. (1827.)]

danum by enema, would end in exhaustion and death.* More than three quarters of all the cases however, whether severe or moderate, we at first very slightly purged with calomel, so guarded as not to operate before twelve or eighteen hours. It was necessary to manage laxatives with the greatest caution, and very generally, to conjoin them with opium. Calomel, accompanied with a diaphoretic regimen, if retained on the stomach twelve hours without operating by the bowels, in the light cases, would lessen, and often remove all the morbid action; yet, much more caution was necessary in this process, to ensure a resolution, than in common typhus. Nevertheless, more than two copious dejection never took place, without the most obvious injury. *It is as safe to leave a wounded artery to nature,* as in this disease, to administer a cathartic, without directing its free operation to be *instantly* checked by opium. Those patients, who of their own accord attempted, at the outset of the disease, to purge themselves, even with castor-oil, provided it operated more than once or twice, were commonly found by the physician in little better than a dying state, and always required the most assiduous exertions for their recovery. Several that adopted this plan were seen, who could never be raised, and obviously sunk down and died, in consequence of it. One patient was seen, that sunk irretrievably, by a single operation of an enema.† In about a fourth of those patients who had the disease in its severest form, a judicious physician would no more think, at first, of vomiting or purging, than of employing those processes to mitigate the struggles of the dying. In several of the *worst* cases, *cathartics could not be made to operate,* while the patient was in the lowest state, and there was not the least inconvenience, from having nothing pass the bowels for a week; and in some of these, when the patient was considerably better, the bowels spontaneously resumed their natural action. The proper time for evacuating the bowels, in the lowest cases, was indicated by tenderness of the abdomen, uneasiness, or slight pain, which showed that the torpor of the intestines had ceased. Under these circumstances, the discharges were never indurated, but were always perfectly natural. In many cases, a single enema, or a small quantity of magnesia, or rhubarb, or an aloetic pill, was necessary as an eccoprotic, or at farthest, as a laxative once in two or three days. It is to be observed, that the Opium should not be abstracted on account of the laxative or any other article, but only as the other symptoms admit. On the whole, the best way of evacuating the bowels, appeared to be produced, by giving daily about a drachm of magnesia, and if necessary, assisting it every other day by an enema.

The opinion, that in this disease, and more especially in any of the distinctly marked cases, purging would increase the susceptibility to the impression of stimulants, was *utterly unfounded. The morbid action could not be changed,* in the severest cases, *by evacuants and alteratives;* it could only be controlled by exciting and supporting the vital powers by stimulants, and such articles as appear to have *an immediate action on the brain and nervous system.*

If by vigorous treatment, the system could be raised in a day or two, to a mercurial, or purging, or vomiting point, the victory might be considered as already gained, and there was very seldom any need of either of the pro-

* In some few cases under peculiar circumstances, where torpor prevailed, emetics of zinc and ipecacuanha, in skilful hands, have successfully roused the system; but then it often requires a drachm of each to operate. Small doses are worse than useless. Emetics combined with calomel, have sometimes a favourable effect in the beginning of mild cases, but they require extreme caution in any case of sinking fever. The epidemics of different years, vary very much, as respects the safety of emetics, and much depends upon the preponderance of irritability or torpor; and much whether the attack is insidious or sudden. In sudden and violent cases, emetics and cathartics, at first, are utterly inadmissible.

† When patients are mentioned *as seen,* it is meant in consultation, and they are not included in the three hundred and sixty cases, the immediate subjects of this sketch.

cesses of vomiting, purging, or ptyalism afterwards.* As a general rule in this epidemic, it might be affirmed of cathartics, with the utmost certainty, *juvant per casum, nocent per se.* In every instance, the mildest forms of the disease were rendered severe and unmanageable, by *free* purging or vomiting. If they did not sink, which was usually the fact, they became *factitious* bilious fevers, which were obstinate and unmanageable.† In a few *bad* cases, in which a slight mercurial action was excited, it was of no sort of service; and in such cases, if irritable, strangury from cantharides only distressed the patient.

Opium was the most important remedy in the severe form of this disease, and was, in such cases, *regularly* administered from the very first visit. A few cases imperiously required half an ounce of the tincture in an hour, or half a drachm in substance, in the course of twelve hours, before the urgent symptoms could be controlled; and even some cases required a drachm in the same time. All these patients recovered. In nearly every fata case of this year, there were circumstances to prevent a free use of medicine. *The whole of those patients of* 1823, *whose symptoms were promptly met with opium, invariably recovered.* Opium *enough*, assisted by external applications, would command every peculiar symptom, with as much certainty, as any effect can be promised from medicine, except the extreme sinking, after a critical effort, in a neglected, or ill-managed case; and even in this forlorn state, it always mitigated much of the anxiety and distress, and prolonged life. Many other articles, however, were very useful in the course of the disease.

Alcohol was highly beneficial in some cases, and required to be employed freely in many, but it seemed not to be equally adapted to all, and on the whole, was of much less importance than opium. Wine seemed totally unfit for the severer cases.‡ Lytta and capsicum internally, were very service-

* It is very certain that no instance of intoxication took place this year, from the use of alcohol; but in former seasons, when any thing like it was supposed to occur, it is stated that the patient was free from danger, and that all medicine might be soon abstracted. Of this the writer is merely informed by friends, and is somewhat sceptical; as he never saw intoxication, or had the least reason to suspect it, in a fever, in a single instance. Such cases, therefore, are of rare occurrence. The coma and delirium, though so often mistaken for intoxication, are symptoms of the disease, and when taken early, almost infallibly yield to alcohol and opium, in *sufficient* quantities. These symptoms are often mistaken by superficial observers, for intoxication, when no alcohol, opium, or stimulant of any kind, has been administered.

† In so many fevers is it necessary to keep the bowels free, and in so many diseases is the weight of morbid action lessened by a strong impression on the alimentary canal, it is no wonder that physicians, inexperienced in sinking diseases, with the greatest difficulty, can realize the inconvenience and hazard of active cathartics in this fever. In sinking cases, the effect is obvious and immediate; But it requires repeated trials, before a physician is ready to allow, that the bilious cases, which usually sink at the end of a week or fortnight, are factitious, and of his own creation. *Comment, en effet, n'a til pas vu que, dans plusieurs cas, non seulment la maladie a été exaspérée, mais même suscitée par les moyens curatifs, et que l'anomalie des symptoms suivit celle du traitment?* The great hazard of free purging in this disease, only shows that it is a powerful agent when it is indicated in others, and is an argument for its use, when properly applied. Agents that are liable to do no harm, seldom do much good in medicine.

‡ From being in the habit of *commanding* the urgent symtoms with opium, to the extent of one, two, or three grains, every hour or half hour, *during the paroxysms of sinking*, and afterwards *keeping up* its effects by one grain, every two or three hours, or even a grain or more every hour in extreme cases, the author has generally been able to dispense with the vast quantities of alcohol, that are requisite upon a different plan; though now and then a case requires it, in as large a quantity as the stomach can retain. It is rare that more than a pound of diluted alcohol is administered in twenty-four hours, and usually much less. When the stomach is very irritable, hot infusions as cloves, cinnamon, or other aromatics, are frequently preferable to alcohol. In a *few* instances, wine, porter, and bottled cider, are properly substituted for diluted alcohol. *Food regularly administered*, such as a spoonful or two of broth or milk porridge, every hour or half hour, *is as necessary as medicine*, in the lowest cases. Opium by enema is often necessary to check diarrhœa and other symptoms, but is generally a very poor substitute in urgent cases, unless there is uncontrollable vomiting, for the usual method of taking it *in substance* into the stomach. In many cases, *large* quantities of alcohol, and even of opium, might be dispensed with, if the patient had not been sunk by emetics, or cathartics, or other preparatory means, which might be highly proper in regular typhus or nervous fever. The Ipecacuanha and neutral salt in Dover's powder, are injurious in all severe cases. Antimonials, and the common neutral salts, are out of the question. The truth is, the disease is so urgent in its violent form, that not only is the stage of reaction wanting, but also there is no necessity nor time for preparation. *The exhaustion must be attacked immediately, by such means as will produce a new secretion of vital power.* Some gentlemen, from having only read the author's *essay* upon the *resolution of fevers*, have made very great mistakes, in attempting to apply the treatment which is proper for *regular* nervous or putrid fevers only, to the disease now

ble in the torpid cases, but were entirely unmanageable, and greatly increased the irritability of most of those which were previously irritable. Arsenic, (Fowler's mineral solution,) was highly serviceable when the head was very much affected, and the stomach at the same time torpid. In some irritable cases it answered well, but it was necessary to adjust the dose very accurately, in order to have its full effect on the one hand, and not offend the stomach on the other. In these cases however, it agreed better than any thing else, except opium, or perhaps alcohol and aromatics. Delirium resembling mania, was occasionally relieved by tincture of stramonium, combined with tincture of opium. Camphor and ammonia answered a good purpose in the more moderate cases, but were worse than nothing in most of the severe. Ether was of no service for permanent support, but was occasionally very useful during the sinking paroxysms. The same was the fact with peppermint, and other essential oils. Oil of turpentine was not used internally.* Musk in doses of ten grains to a scruple, is a very effectual remedy in many cases of obstinate vomiting. It is best given in substance, in any convenient liquid. From five to ten minims of oil of peppermint in saccharum, are sometimes borne in cases of torpid stomach. Cinchona, and the other *vegetable bitters and tonics*, did not the least good in the *severe* cases. They were too slow in their action to produce a perceptible effect, till after a crisis, or in the protracted stage of such casess as assumed the form of common typhus. After convalescence commenced, they were often useful to assist in retaining the ground which had been gained, and to accelerate recovery. In these instances, if the stomach was irritable, sulphate of quinine was preferable to any other preparation of cinchona.†

In all the varieties of this disease, internal medicines were greatly assisted by external applications, which were adjuvants that could never, with safety, be omitted. When it was practicable, the early use of the *hot-bath* was of

under consideration.* If they had read the 6th, 10th, 11th, and 14th essays with attention, they would have seen the outlines of the principles and practice, in irregular fevers. To consider and treat this disease as ordinary nervous fever, is often a fatal mistake. As the second, or preparatory stage, [see the author's essay on stage, in *essay on fevers*,] for practical purposes, is entirely wanting in all malignant fevers of the nervous type, [see essay on type,] the preparatory process, so indispensable in most other diseases, is therefore, both unnecessary and pernicious. Except to obviate some peculiar symptom, emetics, in comparison with *slow and moderate purging with calomel*, are very indifferent practice, even in nervous fever, and since blood-letting has been laid aside, antimonials are the most fatal of all kinds of treatment, which are ever adopted in our late epidemics. [It will be recollected, that it is in diseases of the *nervous type*, that the author has found antimonials to be so *peculiarly* exceptionable. He does not here enter into the controversy about their employment in *putrid* fevers.] They change the whole aspect of the disease, and make it a very different thing from what it would otherwise have been. Active cathartics, (and even any cathartic at all, for several of the first days, in the worst cases,) are scarcely less exceptionable. It must not be forgotten that this disease, very evidently is neither excited nor aggravated, by any thing that is *naturally* found in the alimentary canal in its usual quantity. There is less reason to suspect morbific matter in this, than in any other fever.

* In some years, oil of turpentine internally, has been found serviceable in torpid cases; but it is usually rather unmanageable in those which are irritable. It may be given by enema, in doses of a drachm, with a drachm or two of laudanum, every four or six hours, in coma. Ether by enema is proper in such cases.

† Cinchona is peculiarly adapted to putrid fevers; it is of but little service in the *purely* nervous, if they have not been previously prepared by calomel; and unless there are aphthæ, or symptoms of the alimentary canal that demand astringents, or unless the fever assumes the the form of common typhus, it is of no service in this disease, till the stage of convalescence. Where the stomach is not irritable, it may be given in immense doses, and suddenly abstracted without any perceptible effect. Sulphate of quinine will not irritate from its bulk, but this is probably its only convenience. It is apt to produce a sense of constriction in the stomach, when given in large doses. No peculiar benefit from it, in preference to other preparations of cinchona, except in irritable cases, has been seen in the acute stages of any disease, beside intermittents and remittents. The author is fully convinced, that in these latter diseases, it is nearer a specific than any other medicine. Four or six grains a day, are serviceable in many cases of slow convalescence. But in most other cases except intermittents, the ordinary preparations of the bark appear to be preferable, provided the stomach is not too irritable to retain them. It has probably had as repeated and fair trials in this town as any where, and this is the result of the experience here, concerning the sulphate of quinine. It would seem to be by no means a complete substitute for cinchona, in ordinary cases, though from its great concentration, and its being so easily taken in the form of pill, it is a very important article.

* See, Miner and Tully on Fevers.

great service, and it was much to be regretted, that it could not be oftener employed in the first stage. Warm or tepid bathing, was rather injurious. The water should be so hot, as to make as strong an impression as can be borne, without danger of scalding. When strong, and at the same time quick rubefacients were required, bottles of hot water, heated bricks or wood, hot spirits, mustard, liquor of ammonia, capsicum, and oil of turpentine, were important agents. Epispastics of cantharides would produce no effect, in many cases, till the skin had been first excited in this way; but as soon as the susceptibility of the patient was raised by internal and external means, to the blistering point, the freest application and repetition of them, was attended with the most obvious beneficial effects. They were more especially useful to the *shaved vertex*, forehead, temples, spine, epigastrium, and extremities. In every case, (*the very mildest are not with safety excepted.*) the forehead, and in the severe, the vertex should be immediately blistered. Shaving the head, and blistering it *early*, is more serviceable than any other external application. Torpor of the bladder almost invariably yielded to sinapisms, or more especially, to blisters on the inside of the thighs. So sensible were those patients who had their reason, of the beneficial effect of blisters, that they frequently begged to have them repeated. To one patient, more than twenty blisters, and to another, more than thirty were applied during the course of the disease, and evidently with the greatest advantage. *Oil of turpentine, warmed, and confined to prevent evaporation, was the speediest epispastic*, and was of much benefit in coma. In a very few cases, there supervened such a peculiar irritation in the latter stage, that blisters required to be repeated with caution, on account of strangury, as this symptom, in irritable cases, sometimes increased the morbid action. It always lessened it in cases of torpor. In no other disease is it so essential to distinguish *counteracting* from *coinciding* agents. But after all, in the severest forms of the disease, *opium, alcohol, arsenic, aromatics, and external applications*, with no other medication, might be depended upon.

In the *mildest* cases, after *cautious* purging with calomel, the prescriptions were almost *negative;* such as, to avoid vegetable acids, cold water, muscular exertion, *an erect position* for any considerable length of time, much purging, and various other hurtful measures. [Whatever increases the peristaltic motion of the bowels, produces an evident tendency to *sinking*, even before the evacuation takes place; and some of the worst paroxysms of *subsidentia* ever met with, have occurred during the operation of the mildest cathartics, and even from a single enema. However, in the mild cases, moderate purging is proper. (1827.)] Numbers of cases might be stated, in which the patients, while labouring under an apparently moderate disease, from a false idea that they should gain strength by sitting up, have produced the most dangerous paroxysms of vertigo and sinking, some of which have been followed by death. Many of the severest cases did not admit of being moved from their beds for several days; since the slightest motion, or change of position, was liable to produce a severe paroxysm of sinking, and increase the exhaustion to such a degree, as to require hours to regain the ordinary strength. Some slight cases might be trusted to aromatic, bitter infusions, alone; others, to camphor and ammonia. In several of these, no calomel, or opium, or alcohol, or any active medicine, was needed or employed, provided all hurtful measures were studiously avoided. In many, a blister to the forehead, serpentaria, camphor and ammonia, compound tincture of cinchona, and opium in very small quantities, were all that were required.

Profuse sweating from external heat was useless in the mild, and inefficient, or injurious, in the worst form of the disease, unless employed at the very access; and, in this stage, it could rarely be used with convenience. By the time a physician is called, it is generally too late for sweating to be of much service; though, when employed very early in cases of *sudden attack*, it is sometimes capable of breaking up the disease, especially in the

torpid variety. Under such circumstances, it ought, generally, to be tried.* The duration, severity, and mortality of this disease, depend more than any other, upon the early management.

On the whole, it must be repeated, the epidemic afforded the most decisive evidence in favour of the efficacy of a free use of opium, when employed in season, for the removal of coma and other atonic affections of the brain. When the early treatment was efficient, there was sometimes a resolution in twenty-four hours, or the disease rarely lasted longer than five or seven days; but when the practice was so timid and inert, as only partially to meet the symptoms, if the patient did not immediately sink, it was generally protracted somewhat in the form of common typhus, fourteen or twenty-one days, and in some few cases, four or five weeks. [For other particulars concerning principles and practice, see Essays on Fevers, etc., especially those parts of the work which treat of the *irregular* varieties.]

This epidemic, very obviously, was not common typhus, as that term is intended to include the nervous and putrid fevers of the older authors. What then was it? It has been questioned whether it was nosologically the same as the Hartford spotted-fever of 1809; and by those who did not witness the disease, even whether that epidemic differed essentially from common typhus, or nervous fever. The peculiar and extreme deficiency of vital energy in the brain and nervous system, from the very access of the disease, *without any appreciable reaction during the whole course*—the early urgency of the symptoms—the constant liability to coldness of the extremities, and numbness of the skin—its degree of insusceptibility to the action of strong rubefacients and blisters—the peculiar, distressing, and death-like SINKING in the epigastrium—the craving of hot liquids—the alternation of extreme torpor and excessive irritability of the stomach—the great liability to sudden and irremediable sinking—the respiration resembling that of animals in which the *par vagum* has been divided—the immediate exhaustion produced by an erect position—the delirium resembling intoxication, (when neither alcohol, opium, nor any other medicine had been used)—the extreme variableness and irregularity of the pulse, particularly its occasional deceptive fulness and force, when the patient is in the most alarming state of exhaustion—the very rapid progress of the disease—the impunity, at least, with which the most extraordinary doses of opium were borne, (which must be acknowledged by all, from the unparalleled success of the practice, whatever may be realized of its necessity and advantage by those who did not watch the whole progress of the cases,)†—the injurious effects of *free* eva-

* Whether there is more irritability, or a greater disposition to diaphoresis, or whether the disease is more frequently insidious in its attack, or from whatever cause, it is certain that sweating is less efficacious now, than it formerly is said to have been. In certain circumstances it is very exhausting, and ought not to be promoted after the patient is thoroughly warmed. The fumes of burning alcohol, introduced into the bed by a tube, answer much better than the vapour of hot water, for warming the patient. Numbness often requires smart friction with flannel. Capsicum sprinkled on cotton applied to the feet, legs, thighs, arms, and spine, is an excellent application for coldness and numbness. Fumigations of camphor are well worth a trial, especially in spasmodic cases. Sweating from external heat, and warm aromatic drinks, is all that should ever be attempted to be done, in cases of sudden attack, before medical aid is obtained. Vomiting or purging should never be hazarded before a physician is called, when such an epidemic prevails, as it usually produces such sinking as to aggravate the disease, and often endangers life.

† Notwithstanding the extreme *malignity*, (by which *term* is meant, whether the fever is of the nervous or putrid type, *a peculiar deficiency of vital power, and consequent insusceptibility to the curative action of ordinary medicines, in ordinary doses.*) the practice in this disease was attended with a success, scarcely paralleled in the annals of medical history. For seven months there was a constant succession of cases, nearly one half of which required very energetic treatment, and several of them the strongest practice which is ever admissible; and there were but six deaths among them. The public scarcely knew that there was an epidemic prevailing, the knowledge of it being mostly confined to the families and connexions of the sick; and they could not realize the extent and danger of the malady. There had been nothing very uncommon in the season, during the spring and summer, though it was perhaps rather more variable than usual; but from the eighteenth of September, to the latter part of December, the weather was remarkably cold. The chilly, dark, unpleasant weather of November, in which month six died, though it did not materially increase the number of cases, seemed to aggravate the symptoms, and to add to the severity of the disease. The extreme heat of summer, when the mercury of the thermometer is above 90°, is equally unfavourable. For a general rule, it is evident, that *the variations of the barometer, ther-*

cuations, whether spontaneous or factitious—the general inefficacy of all medication to gain a hair's breadth upon the disease, when, from neglect or bad management, the patient had once sunk down at a critical period, though perhaps the same degree of exhaustion might not have been very alarming at the crisis of any other ordinary fever, and though individual symptoms might be capable of material palliation—the absence of febrile smell, and, indeed, of any uncommon fetor of the excretions—all mark the identity of the disease with the Hartford* spotted-fever of 1809, and evince its diversity from common typhus or nervous fever. From these considerations, it is believed, no one will hesitate to admit that this disease, at least as respects the severest and most sudden cases, was genuine spotted fever, and that it was essentially different from common typhus. Indeed, the two diseases differ so much, especially during several of the first days, that the best treatment of common nervous fever, would prove fatal in every severe case of spotted fever. With the utmost confidence it is asserted, that by the experienced they might always be discriminated, and, therefore, should never, at this late day, be mistaken, or confounded together. It is true, that in a great majority of the cases of this year, the disease was less violent, and more manageable than in the spotted fever of 1809, and, indeed, than it was this same season in several adjoining towns. The only difference appears to be, that the mild and insidious cases, were in a much greater proportion this year, than formerly. The cases of sudden attack, were identically the same as those of 1809, and *all the others* were clearly varieties of the same epidemic. But this is a point of difference which existed to an equal degree between several of the different cases of both epidemics. Why may there not be prominent varieties of spotted fever, as well as of common typhus, yellow fever, cynanche-maligna, pneumonia typhodes, dysentery, &c. ?†

mometer, and hygrometer, have little or no effect upon our epidemics, except as to the *exciting causes* of individual cases, and the modification of such cases as already exist. Why the epidemic constitution is more inclined to pneumonia, or to cynanche, or to spotted fever, or to common typhus, in one year than in another, has never yet been ascertained. Meteorological tables, have hitherto thrown no light upon any thing but the exciting causes, except in miasmatic diseases. It is well known, that the same *exciting* cause produces *various* diseases, according to the epidemic constitution, or prevailing diathesis. It is worth remarking, that every sudden change from warm to cool, invariably proved injurious to the sick, and *vice versa*, during the whole prevalence of this epidemic.

* See Dr. Strong's Dissertation.

† All typhoid diseases, at times, have a strong disposition to run into each other, and are often blended together. If therefore, any one is disposed to consider this epidemic as common typhus, or nervous fever, blended with spotted fever, the author is not inclined to dispute concerning the name, provided it is not allowed to deceive with respect to the practice, and to induce the physician to adopt a treatment which might be proper for common typhus. [By the term *common typhus*, the author, in *all* his writings, means the *nervous* fever of Huxham, or typhus mitior of Cullen, in which there is but little heat and the reaction is moderate. The synochus, bilious fevers of the middle states, and the hot cases of typhus gravior, about the treatment of the stage of reaction of such diseases there has been so much contest, are all very rare in Connecticut; though they are sometimes *counterfeited* by an irritation artificially excited by injudicious treatment. This irritation in its turn counterfeits inflammation. (1827.)] The epidemic constitution, or general diathesis, was decidedly that of spotted fever, and every acute disease was tinged with it, and partook of the same common character. This sinking fever, is certainly described, as an epidemic, by no systematic writer that is usually read in America. For aught that is known, it was never noticed till it appeared in Massachusetts, in 1806. The nearest approach to spotted fever to be met with in any foreign author, commonly found in our libraries, is in the statement of some cases in Johnson's Journal, No. 12. under the head of puerperal fever. Some of those cases, *which are said to have affected men as well as women*, were certainly very nearly allied to the spotted fever of New England if not identically the same. [The disease of the Milbank penitentiary, near London, in 1823, was unquestionably a variety of typhus syncopalis. See, Johnson's Analytical Review for July, 1825. There *would seem* to be no doubt of the identity of cholera of India with our disease; since, during the last two years, the latter has very frequently been attended with cholera. (1827.)] The cholera of India is perhaps a variety of this disease, supervening upon some derangement of the hepatic system. The author has elsewhere expressed his opinion, that the local affection of the spotted fever of New-England, is a typhoid inflammation of the brain, *sui generis*; and that it might properly be named *Phrenitis* typhodes. He sees no reason to change his views. Signs of inflammation, it is true, have not always been detected by dissection; but from the authority of the great Baron Larry, they cannot always be seen even after the most obvious symptoms of [active] inflammation. Morbid Anatomy is usually very fallacious in exhibiting the *causes* of disease and death. It only shows *effects* with certainty. At the present day, every one knows, that in deaths from excessive loss of blood, whether spontaneous or factitious, the same turgescence and distention of the vessels and membranes of the brain exists, that is usually found after the most decided cases of inflammation.

This disease, however, was peculiarly distinguished from every other, by the *early* paroxysms of sinking that attended it, by the entire absence of the *stage* of reaction, which is so essential to ordinary fevers, and by the great effect which opium had in mitigating all the dangerous symptoms of *every stage*, but more especially, irritability, delirium, and coma. In every instance, in 1823, except after the fatal sinking of a critical period, provided a sufficient quantity could be swallowed, or received and retained by enema, (which latter, in some few cases, was the best way of administering it,) it seemed to be invariably capable of obviating the symptoms in question.

In common typhus, whether of the nervous or putrid type, even after a critical sinking, we can, in general, not only call the remaining excitability into action, but, as is evident, actually produce a new secretion of vital power. But this can rarely be done, after the critical sinking of the *worst* cases of spotted fever. If, therefore, we have not produced an early change, or begun thoroughly with a much more energetic course, than similar symptoms in ordinary typhus would demand, or even justify, our prospect of success is small. It is the sudden attacks of the severest cases, which rouse all our energy, and usually make us even more successful in this disease, than in ordinary fevers.*

* It would be a piece of affectation to pass in entire silence, the great excitement which sinking typhus, in common with every other malignant epidemic, has at different times produced in the public mind. The various and clashing opinions upon this subject, among those who are strangers to sinking typhus, *or who have rarely seen a case of it*, are well known; and more obloquy and abuse have been cast upon the physicians, who have extensively and skilfully practised in this disease, than in any other that has appeared in our country, the yellow fever not excepted. This ferment may be traced to several combined causes.

First—Many physicians are extremely reluctant in acknowledging themselves to be unacquainted with any subject that materially concerns their profession, or in allowing that others have had more extensive experience in any important branch than themselves. They who have not practised extensively in malignant epidemics, can never realize how essentially diseases of the same name and *nosological* character, vary in their malignant, from their milder and more common form, and how the effects of medicines vary in these different circumstances.

Secondly—The most malignant diseases in *kind*, are sometimes so slight in *degree*, (plague, yellow fever, and cynanche, for instance,) that they are often known to yield under very inert practice, under improper practice, and sometimes to recover spontaneously.

Thirdly—Much confusion arises from names, almost every acute febrile disease at the present day, being usually called typhus, a term which was formerly restrained to nervous, or putrid fevers. But we now find Cullen's synochus, (the fevers of the sub-putrid type,) the spotted fever of New-England, pneumonia typhodes, cynanche-maligna, nervous fever, putrid fever, &c. all frequently mentioned under one name, and considered as a mathematical unity, so that when we hear that a person at a distance is labouring under typhus, or *the fever*, we have only to guess what is the real disease. No judgment therefore from a given name, can be formed of the propriety of any given method of treatment. Since then typhus is used as a *generic* name, we ought to inquire, what *species* is meant. Is it nervous fever, putrid fever, bilious fever, sinking fever, &c. should be the question, if we would expect any thing like a definite answer.

Fourthly—A great difficulty arises from mixing in a desultory manner, and without a fixed plan, various and opposite modes of practice. Discredit is thus brought upon all; for no one has had a fair trial. When a practitioner, who is ignorant of the nature of typhus-syncopalis, is called to a sinking case, his first attempt is usually, to rouse the system with external and internal stimulants. After the immediate danger from the sinking is overcome, he next thinks of clearing the stomach and bowels, as he would in many other fevers, by an active emetic or cathartic. If the disease is a real typhus-syncopalis, in its severe form, he will then be sure to sink the patient again. This requires more stimulants, and the patient is alternately stimulated and reduced, till a fatal coma or sinking ends the scene. Excitants have been used beyond all bounds, the patient is lost, and the practice brought into disrepute, and clamour raised against stimulants. The truth is, no one course has been properly followed, and closely adhered to, but the patients have sunk irretrievably, under a vacillating and heterogeneous intermixture of exciting and reducing agents. It must never be forgotten, that this is a new disease, and not described, at least systematically, by any foreign author.

Fifthly—The false notion of the necessity of evacuating the contents of the alimentary canal, whether they are morbid or healthy, or whether there are any specific indications for this process or not, or whatever may be the general condition or diathesis of the patient, or the idea that such evacuations are *always* necessary to increase the susceptibility to stimulants and tonics, and rouse the vital energies of the patient, or the groundless theoretical apprehension that the continued use of stimuli, in *acute* atonic diseases, will occasion dangerous excitement, or will be liable to produce what is called indirect debility, because such might be the effect in health, are generally urged in justification of such a course, by those who have not the most positive experience to the contrary, even in the severest and most threatening cases. Every urgent case is irretrievably lost under such treatment, however freely excitants and tonics may be employed in the end. When the attack is mild and insidious, the real danger is usually misapprehended, till violent symptoms are produced by an ill-timed emetic or cathartic, or till the final sinking of a critical period; and then, however much a free and decisive use of stimulants may palliate the symptoms, yet the patient is

To conclude—typhus syncopalis or the spotted fever, when neglected or injudiciously managed, is among the most deadly maladies which a mysterious Providence permits to scourge the human race. When taken in season, and treated with decision and judgment, few diseases yield with so much certainty to a proper course of medication.*

[The name *typhus syncopalis* was first given to this sinking fever by the author, in his publication of 1825. It is now generally adopted as its nosological appellation; and his translation, *sinking typhus*, or sinking fever, has become familiar as its popular name. (1827.)]

often incapable of being raised; and in this set of cases likewise, death too often is the ultimate result.

Both these sets of cases are therefore adduced by the sceptical, in evidence of the inefficacy of stimulants; and their supposed injurious or noxious effects, are subsequently inferred by the observation of a third set of cases, which commence in nearly the same manner as the second, but which in reality are so moderate, as to recover under a mere *placebo* treatment, or no treatment, or even in defiance of a moderately depleting and evacuating course, without the aid of any kind of stimuli.

It is believed however, that *much the greatest difficulty arises from the theoretical speculations of gentlemen, who have never witnessed any very malignant cases through their whole course.* A casual visit in consultation, can afford but a faint idea of the general train of symptoms, or of the powers and effects of a proper course of medication. [See the author's essay on experience, in *Essays on Fevers, and other Medical Subjects.*]

To sum up all in a few words—The public mind is principally agitated, and the dispute is chiefly carried on, *by two descriptions of physicians*; by those practitioners who have not witnessed the disease in its most malignant form, and by those who have never adopted and pursued any regular course of treatment. Hot typhus, or the sub-putrid type, [See essay on type.] often wears itself out, and the patient recovers occasionally under any practice; but there is not an instance to be found in the annals of medicine, of a malignant epidemic of the nervous type, being successfully treated by any other plan than that of *a regular exciting and supporting course of medication.* This is the only treatment which has ever succeeded, and met the approbation of all the able practitioners, from Hippocrates to the present day. [Where it is *evident* that the vital principle is so far extinguished, that spontaneous reaction will never take place, there cannot exist the slightest question concerning the *kind* of treatment. The only difficulty is to distinguish this exhaustion, or collapse as some call it, from depression, oppression, or suspension of vital action, which is liable to occur in some diseases, and is best relieved by a course directly opposite to that which similar symptoms imperatively demand in cases of real deficiency of vital power. The nature of the epidemic generally sets this question at rest; and the effect of various treatment, soon brings the matter to demonstration. Cases of a depressed pulse, which are relieved by depletion rarely, probably never, occur in fevers of the nervous type. In diseases of the nervous type, in which the whole stage of reaction is entirely wanting, a little experience soon removes every difficulty. Excitement and support are the main indications. The morbid action is not to be changed by the means that are most effectual in non-malignant cases. (1827.)

* Whoever will peruse the works of Sydenham with attention, will find that we are indebted to the English Hippocrates for almost all of our correct knowledge of the powers of *opium* in the *atonic* state of acute diseases. Beside employing this article very freely and judiciously in small pox, cholera, colic, and dysentery, he was very sensible of its cordial or stimulating properties, and often used it with much success for *preventing and removing coma.* In Rush's Sydenham, p. 373, the learned editor has the following note. "The account given by our author of his having prevented coma by means of opium, shows the relative operation of that medicine to the state of the system. In an elevated state of the blood-vessels of the brain above the par of health, the same dose of opium will produce delirium, which in a state *below* that standard will *remove coma*, and produce *healthy wakefulness.*" After Sydenham, the great benefit of an efficient use of opium in the low stages of fevers, appears to have been nearly overlooked for about a century, when the practice was again restored by Cullen. It was not Brown, as is generally supposed, but Cullen, who restored this ancient practice of Sydenham, as is expressly stated by Cullen in his Materia Medica, article opium. No modern author has expressed himself more strongly than Sydenham, in favour of this all important medicine. He observes,—"And here I cannot help mentioning with gratitude the goodness of the Supreme Being, who has supplied mankind with opiates for their relief; no other remedy being equally powerful to overcome a great number of diseases, or to eradicate them effectually. Moreover, this medicine is so necessary in the hands of a skilful person, that the art of physic would be defective and imperfect without it; and whoever is thoroughly acquainted with its virtues, and the manner of using it, will perform greater things than might be reasonably expected from the use of any single medicine. For, it must certainly urge unskilfulness, and a very slender knowledge of its virtues, to understand only to apply it in order to procure sleep, ease pain, and check a looseness, since it may be suited to several other purposes, and is indeed *a most excellent cardiac*, not to say the only one hitherto discovered." (See, Rush's Sydenham, page 115, edition 1809.)

ADDENDA.

August 29, 1825.

MISCELLANEOUS REMARKS.

TYPHUS-SYNCOPALIS has continued to be the prevailing disease, and there have not been more than one or two weeks at a time since March 1823, in which it has not been noticed; though occasionally for months, the number of cases on hand has been so small, that the aggregate of the population was quite healthy. Except in the cold autumn of 1823, and in the excessively hot summer of 1825, when in July the mercury for several days was many hours above 90°, *the degree of mortality has been less*, than in any other severe disease, to which this section of the country is liable. The cases of *sudden* and violent attack vary very little, either in their general appearance or appropriate treatment, in different seasons or years; but the *insidious* cases, in different years, and according to the complaints with which they are frequently blended previous to the accession of *paroxysms of sinking*, often assume a very diversified appearance, and occasionally admit of a considerable diversity of practice.

Petecchiæ have been very common the present year. A swelling and soreness of the gums, mouth and throat, sometimes followed by a severe thrush, have been seen where not a particle of mercury had been employed. Among children more especially, a spurious reaction of only a few hours, with *stinging heat*, has occasionally appeared; but generally, the coldness and languor soon returned. Several *torpid* insidious cases have been broken up by *acrid* emetics; and in some others of the same kind, calomel and opium have done equally well, and in two or three days have removed the disease. In some neighbouring towns, but not in this, the first attack has been so violent that no medication has made any permanent impression, and some patients have been seen that have died within three days—one, in ten hours. Several of the insidious cases of the present year have been unusually protracted, and have assumed somewhat the appearance of chronic complaints, the paroxysms of *sinking* occurring in a severe degree only once every seven days, though there was generally a moderate and obvious *subsidentia* every morning, or rather, every forenoon. Such cases have been occasionally protracted, especially under inefficient treatment, eight or ten weeks, and some of them have proved fatal. In no disease is it so necessary to meet every symptom instantly; and the paroxysms of *sinking* when periodical, should *always* be anticipated, by such means as will tend to prevent them. In one point of view, typhus-syncopalis differs from every other fever, and that is in the *degree of severity* of the most distinctly marked cases. As Darwin said of cynanche, it admits of every gradation, from a flee-bite to the plague. *More than half the cases* are usually so mild as to require but very slight medication, provided all injurious measures are avoided.

TYPHUS-SYNCOPALIS may be defined, *A Nervous-fever* in which the stage of reaction is wanting, the torpid or forming stage and the stage of exhaustion being blended together, attended with pain in the head and vertigo, and paroxysms of gastric sinking;* and for the most part, with a cool skin and slow pulse, and an absence of all febrile smell. Petecchiæ, eruptions, ecchymoses, general suffusion of the capillaries, coma, delirium, palpitation, interrupted respiration, numbness and insusceptibility to the action of ordinary rubefacients and epispastics, and *sinking after evacuations*, are much more common than in any other febrile disease. *By attending to these symptoms, it may be more easily*

* No theory leads to more exceptionable practice than that, which supposes sinking typhus to be *originally* a gastric disease. This has been the cause of the death of hundreds, and converted hundreds of mild into tedious and protracted cases, and into spurious bilious fevers. Those physicians who avoid much vomiting or purging, and know how to use opium efficiently in substance, or by enema, are seldom much troubled with vomiting, and rarely mistake it for a gastric or bilious fever.

[See, essay on type, and essay on stage, in *Essays on Fevers.*]

distinguished than any other continued fever. Coma or delirium may sometimes be so severe or so protracted, as to overwhelm or disguise every other symptom; or the attack may be so violent as to destroy life in a few hours; and in these circumstances, in sporadic cases there may be, with the inexperienced, some hesitation as to the nature and name of the complaint; but on the whole there is less liability to mistake, than in the diagnostics of any other acute fever with which we are in the habit of meeting, in the ordinary course of practice. Dysentery, cholera, cynanche, catarrh, cough, pneumonia, measles, rheumatism, gout, and even common typhus, are often complicated with it; yet there is always some prominent symptom by which it may be determined, when the *general affection of the system* is that of typhus-syncopalis.

Case of Mrs. C—— B——, ætat. 25.—This patient, from some cause or other, was habitually costive, seldom having a discharge from the bowels oftener than once a week. Previous to her attack in the present instance, nothing had passed the bowels for five days, during which time, she was engaged in attendance upon a sick sister, whose case proved fatal. Most of this time, she sat up during the night. For the last two days she was unquestionably in a state of predisposition, as she complained of loss of appetite, languor, indisposition for exertion, vertigo, and various other symptoms usually called hysterical, such as quick transition from laughing to crying, without adequate cause, etc.

July 6th, 1825. About 8 o'clock, A. M. while collecting vegetables in the garden, she was suddenly seized with extreme vertigo, complete blindness and deafness, with great distress and faintness, referred to the epigastric region, upon which she immediately fell to the ground, in a state very near to perfect insensibility. On being carried into the house, the surface was observed to be very cold and pale, and there were the strongest marks of distress in the countenance. The by-standers immediately applied tincture of camphor to the face, and smart friction was made, both with the hand and flannel, to the back and extremities. Under this treatment she soon recoverd from her insensibility, but was at the same time, seized with a most excruciating pain in the loins, and the lower part of the abdomen. This was so extreme, that she incessantly cried out for opium; and when some of the tincture was obtained, she would not wait for it to be dropped or measured, but insisted upon taking instantly, and unmixed, a quantity, which to the judgment of the attendants, must have been about half a fluid ounce. Her customary physician being absent, and some miles distant with other patients she waited, without medical aid, about an hour after taking this dose, but as it made no sensible impression, and there was no relief, but indeed rather a gradual augmentation of the pain and distress, she requested that another practitioner should be called in. On his arrival, he directed an enema of nearly four fluid drachms of tincture of opium, in a little warm water, together with the application of strong sinapisms to the bowels, and horse-radish leaves dipped in hot water to the extremities. After waiting another hour without any perceptible mitigation of the pain, and the physician who had already visited her being engaged professionally elsewhere, another was now called. This gentleman supposed all the symptoms which had thus far occurred, were the mere result of a sudden *Prolapsus uteri*, and under this notion, he very strongly disapproved of the measures that had been taken, and on the score of the opium particularly, he excited considerable agitation and anxiety, both of the patient, and the bystanders. According to his views (as subsequently stated) the introduction of a pessary was to be the most important means of relief. Notwithstanding this opinion however, he prescribed twelve drops of tincture of opium, every four hours, and twenty of spirit of ammonia every two hours, and departed. In another hour, the customary family physician arrived. At this time, according to the statements of the patient and attendants, there was still very little mitigation of the pain. The pulse was quick, and gaseous, (or in other words,

soft and weak, with considerable apparent fulness,) and as infrequent as fifty-five in a minute. The temperature, though declared not to be near so low as it had been, still fell considerably short of the natural standard. The countenance was motley, being principally very pale, but with a few livid patches; the lips were livid; the tongue was much contracted and pointed, and its surface was shrivelled, and somewhat redder than natural. There was no thirst, though the patient lay with the mouth open. The respiration was hurried and laborious, and resembled that of a person who had just been making violent bodily exertion. Another enema of half a fluid ounce of tincture of opium in a little warm water, was immediately administered, and three grains of opium, in conjunction with half a fluid ounce of spirit, and the same quantity of hot water, were taken into the stomach. As the external applications had produced no apparent effect, the mustard was removed from the abdomen, and a plaster of the cerate of lytta (of the P. U. S. A.) of at least forty-eight inches surface, was applied in its stead, and horse-radish leaves dipped in hot water, were renewedly applied to the whole extremities. Two grains of opium in pill were directed to be taken every two hours subsequently, and a hot mixture of one part spirit and two parts water, was advised *ad libitum*. About 3 o'clock P. M. the patient had become much easier, but still was not entirely free from pain. The frequency of the pulse was a little increased, but still it was preternaturally slow, being about sixty in a minute; the temperature was restored to near the natural standard, and the whole surface was thickly sprinkled over, with dark-coloured petecchiæ; the respiration was less laborious, but was still unnatural. There was no change in the tongue, but the patient had once vomited a small quantity of a transparent liquid, of a light grass-green colour. A slight degree of talkative delirium had taken place, and on inquiry, a considerable sense of faintness and distress was complained of, at the stomach. An epispastic was now applied to the forehead, and another large one between the shoulders; and in addition to what the patient was already taking internally, a mixture of ten minims of the liquor of the arsenite of potassa, and forty of the tincture of opium, was directed at every intermediate hour between the pills. The horse-radish leaves were again renewed to the extremities. The epispastic upon the abdomen had not yet produced any perceptible effect. During the evening, rubefacient effects began to be produced, by all the external applications; but with the exception of a considerable itching of the surface, there was no appreciable change of symptoms. The medication heretofore specified, was directed to be continued through the night.

July 7th. This morning the patient was found free from pain, and perfectly rational. The pulse remained stationary, the surface was of a natural temperature, the petecchiæ of a florid colour, the tongue was dilated and flabby, with the upper surface covered with a loose, slimy, dirty fur, and the edges and under surface livid; there was no thirst, and no irritability of the stomach, but still a great sense of distress and sinking was complained of in the epigastric region, which was uniformly aggravated by the slightest motion of the head.

At this time, both sides of the head were shaved, and large epispastics were applied, and likewise another epispastic, over the stomach. The same internal medication, that was directed the night previous, was continued, with the variation only of assigning a regular period for the administration of the spirit, of which a table spoon-ful of a mixture one part spirit, and two parts of bread-water, was directed to be given every intermediate fifteen minutes, between the doses of the other medicines. During this day, and the succeeding night, the symptoms were kept pretty well at bay by this course, except that the patient vomited twice toward morning.

July 8th. The patient tolerably comfortable. An epispastic was applied to each wrist. Both the day and the night passed in a pretty uniform state

July 9th. This morning, the symptoms still pretty much at a stand. The patient and her friends were now solicitous to have a discharge from the bowels, and though the abdomen was perfectly soft, and equally free both from distention and uneasines, yet the physician yielded to their solicitations, and permitted a laxative enema of decoction of tansey with common salt and molasses, to the employed. In about an hour this came away, but with only a slight discharge of fœcal matter. Epispastics were at this time applied to the ankles, but in other respects, the same medication as heretofore was continued.

July 10th. This day the symptoms continued stationary, till the latter part of the night; and consequently, the medication was unchanged.

July 11th. The fifth day of the disease. This morning the pulse was found much more frequent, being a little upwards of a hundred in a minute. The skin was again considerably cooler, and the fur of the tongue was loose. There was distressing singultus, and rejection of every liquid taken into the stomach.

At this time, as this change was considered as a critical effort, all medicine was discontinued, except a pill consisting of two grains of opium, every two hours. Common tea, and simple chicken broth, very hot, were allowed often, in teaspoon-ful doses, and the patient was enjoined to refrain as far as possible from all talking, and all motion, particularly of the head, as moving this part had hitherto invariably occasioned faintness, sickness, and sinking at the stomach. Under this course, a considerable improvement of all the symptoms was found, at 7 o'clock P. M. the pulse was less frequent and more full, the skin was warmer, the tongue was clear from fur, though quite red, the singultus and vomiting were gone, and the patient had had some quiet and refreshing sleep. The night passed tolerably well under the same course.

July 12th. To all appearance, the patient was now pretty free from disease. The interval between the pills was protracted to three hours; and two fluid drachms of the compound tincture of cinchona, were directed every two hours. Improvement continued through the day and night. Towards morning there was some manifestation of returning appetite, and food sat well. Milk porridge was allowed, with crackers soaked in tea, coffee, or brandy and water, and likewise a little cod-fish, soaked soft and picked fine.

July 13th. Symptoms nearly stationary. A laxative enema, prepared as the previous one had been, was now employed. This soon operated twice pretty freely, and occasioned considerable faintness, and increased weakness. On this account, an extra pill of two grains of opium was given. The regular pills and tincture were continued as the day before. This day and night, on the whole, passed tolerably well.

July 14th. The interval between the pills, was this day lengthened to four hours. The tincture was continued as usual. The patient was now able to take sufficient food, and to sit up in bed. Passed the whole twenty-four hours well.

July 15th. Still improving. Took only four of the pills this day.

July 16th. The patient now able to walk about her room. Discontinued both the opium and the compound tincture of cinchona, and in their place substituted a teaspoon-ful of an aromatic tincture of gentian, in a glass of wine, every four hours. During convalescence, a great number of minute carbuncles made their appearance, which did not disappear entirely under about a fortnight.†

Case of Miss L—— S——, ætat. 16.—This patient was in a state of predisposition, for about a week, during which time she complained of languor, indisposition for exertion, headach, pain of the limbs, nausea, occasional

† This patient had an attack of the same disease, in March, 1825, equally severe, which yielded to similar treatment.

vomiting, and diarrhœa. For the last twenty-four hours of this period, both the body and the limbs were thickly covered with distinct, but dark purple petecchiæ. In the course of this time, the patient, of her own accord, had taken one cathartic of aloes with canella, which operated but moderately; and the day previous to the attack of her disease, another of sulphate of soda, which operated freely.

July 8th, 1825. About one o'clock, P. M., after drinking freely of lemon punch, which contained only a very small quantity of spirit, she was suddenly seized with great distress, and sense of faintness and sinking in the epigastrium, followed immediately by the most extreme pain in the lower part of the abdomen, much resembling that of parturition, but far more severe. Upon the occurrence of these symptoms, the whole body and limbs quickly became cold, and insensible to the most powerful irritants and rubefacients, the countenance pale, sunken, and ghastly, the lips livid, the tongue contracted and pointed, but without fur, the respiration interrupted, and resembling that of a person just beginning to recover from asphyxia. There was likewise violent delirium, and complete inability to swallow; but notwithstanding this general condition, the pulse was perfectly natural in all respects.

On account of the inability to swallow, no internal remedy could be employed. An enema, consisting of half a fluid ounce of tincture of opium diluted with a little hot brandy and water, was immediately administered; frictions were thoroughly and perseveringly employed; and after their discontinuance, the whole body and extremities were covered with horse-radish leaves, previously dipped in hot water.

In the course of two or three hours, there was an obvious mitigation of all the symptoms, though no individual of them had disappeared. Deglutition, though difficult, was now no longer impossible, but yet the muscles concerned in this process, seemed to be partially paralytic, and when any effort was made to swallow, they acted irregularly and convulsively.

Strong epispastics were now applied to the forehead, between the shoulders, and to the epigastric region; and the rubefacients to several parts of the body were renewed. Forty minims of tincture of opium, and ten of the liquor of the arsenite of potassa, were directed every two hours, and at every intermediate hour, two fluid drachms of officinal alcohol, in some hot liquid. In addition, ginger mixed with hot spirit and water, and tincture of camphor diluted with hot water, were administered in considerable quantities, as they could be got down.

Through the remainder of the day, there was a moderate, but gradual and regular alleviation of symptoms, till about ten o'clock, P. M., when a very irritable state of the stomach suddenly took place, accompanied with extreme epigastric sinking and distress, greatly hurried and panting respiration, very weak, soft, and small pulse, as frequent as a hundred and forty beats in a minute, together with a cool, moist, and flabby skin.

The tincture of camphor, the officinal alcohol, and the spirit, were now omitted, and two grains of opium in pill, were given at every intermediate hour, between the regular doses of tincture of opium, and the liquor of the arsenite of potassa. Epispastics were applied, in addition, to the ankles. Under this course, all vomiting soon ceased; there was quiet and refreshing sleep, consisting of short naps, from which the patient was easily roused, and the night passed comfortably.

July 9th. This morning there was considerable mitigation of all the symptoms; the temperature was nearly as high as natural, the countenance was brighter, the epigastric distress and sinking were gone, the mind was tolerably steady, the pulse slower and fuller, the tongue covered with a light brown fur in the middle, and red at the edges, and the petecchiæ were beginning to disappear, (as often happens under such a course of treatment,) but there was such torpor of the bladder, as to occasion a total inability to void urine.

For the last mentioned symptom, strong epispastics were applied to the inside of the thighs; but in other respects, the same medication that was employed the night before, was continued. The day passed comfortably, and with some further mitigation of all the symptoms; but as the torpor of the bladder still continued, an enema of decoction of tansey and ginger, to which was added common salt, was administered in the evening. This came away during the night, but without any fœcal discharge of consequence from the bowels, though with a free evacuation of urine.

July 10*th.* This morning there was no material change in the symptoms. The patient, however, was full as well as the day before. The sleep had been quiet and refreshing, and the patient was easily roused by the slightest means. One or two additional epispastics were now applied, but no change was made in the internal remedies. As during this day and night the symptoms continued at bay, no change was made in the medication, except the addition of two small epispastics to the arms.

July 11*th.* This day and night no change of any consequence in the symptoms, and of course the same medication continued.

July 12*th.* Till the evening of this day, there was no material change either in the symptoms of the case or the medication. During the evening, it being the early part of the fifth day of the disease, great irritability of the stomach suddenly took place, and all liquid medicines were rejected. The surface immediately became considerably cooler, the pulse as frequent as a hundred and twenty in a minute, the respiration hurried, and a profuse sweat took place. At this time, two grains of opium in pill, were directed every hour, and every thing else was interdicted till the stomach should become composed, which happened in the course of the night. After this, the pill was given only every two hours, and at the intermediate hour, a small quantity of spirit and water was allowed, and a little common tea made very strong.

July 13*th.* This morning the patient was much better, the skin was nearly of the natural temperature and softness, the pulse was less frequent, the stomach perfectly settled, and the tongue fast losing its fur. At this time, the interval between the pills was lengthened to three hours, and half way between, two fluid drachms of compound tincture of cinchona, were directed. During this day and night, there was considerable improvement.

July 14*th.* The patient still improving. The pills were now given only every four hours, and the compound tincture of cinchona, half way between. Food was taken with considerable relish, and in considerable quantity.

July 15*th.* This day took only four pills, and then discontinued them entirely. No further medication, except a little of the tincture necessary. Convalescence was subsequently rapid.

Case of Mr. R—— F——, ætat. 23.—This patient, for several days previous to the attack of his disease, had complained of languor and weakness, and had been pretty much destitute of appetite. During this period of predisposition, he took two cathartics, one of which was sulphate of soda. This operated freely, only the day before he was seized. The night immediately previous to his attack, he spent in watching with a patient sick of the prevailing epidemic.

July 10*th,* 1825. While walking in the street, between twelve and one o'clock, P. M., he suddenly observed to a companion, that he felt as if intoxicated, and almost instantly fell to the ground. He was immediately carried into a house, and medical aid was called. On the arrival of the physicians, which was about one o'clock, P. M., the patient was still in a state of entire insensibility; and his condition, to the eye of a bystander, resembled a person labouring under a serous apoplexy; or more exactly, one recovering from a state of asphyxia from drowning. The surface was pale and cold, and covered with a clammy sweat; the eyes were fixed; respiration was

slow and interrupted, and seemed as if carried on entirely by mere voluntary exertion; pulsation at the wrist was barely perceptible, and there was total inability to swallow.

After wiping and thoroughly rubbing the skin, epispastics were immediately applied to the forehead, sides of the head, and between the shoulders; and nearly the whole of the body and extremities were covered with sinapisms. As no tincture of opium was at hand, an enema, consisting of a fluid ounce of oil of turpentine, mixed with the same quantity of oil of olives, was immediately administered.

In about two hours, the skin was raised nearly to its natural temperature and softness, and the pulse acquired so much force, that its beats were easily ascertained to be about fifty in a minute. There was now no stupor, but considerable delirium had taken its place. The eyes had a fixed and vacant stare, but when the patient was spoken to, he immediately raised himself with a frightful expression of countenance, somewhat resembling that of a rabid person. There was, at the same time considerable deafness.

A mixture of thirty minims of tincture of opium, thirty of strong tincture of lytta, and three of the liquor of the arsenite of potassa, was now directed to be given every two hours, and at the intermediate hours, a pill consisting of a grain and a half of opium, with two grains of calomel. Spirit and water were prescribed for drink. During most of the remainder of the day, and the subsequent night, there was violent delirium; but,

July 11*th*, at eight o'clock, A. M, the patient was found free from this symptom, though, in its stead, there was a great sense of distress and sinking in the epigastrium. The pulse was now very soft, weak, and frequent, the skin cool, and both the body and extremities covered with petecchiæ of rather a florid colour. The countenance was, at the same time, pale and sunken, the tongue was pale, and of a bloodless appearance, and coated with a thick, but slimy and dirty fur.

At this time an epispastic was applied to each wrist, an occasional use of camphor, and a free use of spirit was directed, and the opium, both in substance and tincture, with the liquor of the arsenite of potassa, as heretofore specified, was continued. The tincture of lytta, and the calomel, were, however, abstracted, the former on account of a copious and exhausting diuresis, which it had evidently produced; and the latter, because it was now deemed injudicious, and believed never to have been indicated. Neither of these articles appear to have been proper in this case. At eight o'clock, P. M., the patient was again delirious, and much inclined to coma, but the epigastric sinking and distress seemed to be somewhat less. The pulse was very weak and soft, and the tongue as last specified.

The spirit, and the opium in substance, were continued as heretofore, but the dose of the tincture of opium was increased to forty minims, and that of the liquor of the arsenite of potassa, to ten minims; and an epispastic was applied to each ankle.

July 12*th*. This morning no material change perceived in the symptoms. Additional, but small epispastics, were applied to the legs and arms, but in other respects the same medication was continued. In the course of the day considerable strangury took place.

July 13*th*. This morning the symptoms still stationary. New epispastics were applied to the inside of the thighs and arms, but the same medication, in other respects, was continued. At evening there was pain in the bowels, which was soon followed by an urgent diarrhœa, ten or twelve discharges happening in the course of the night, though four extra pills of opium, of two grains each, and three enemata of four grains of opium in powder, were given during this time. This quantity of opium kept the patient from sinking under these profuse evacuations. Judging from the effects of calomel in other cases, it is believed that the diarrhœa was to be ascribed to that article, which, it will be recollected, was used at the commencement of this

case. Through this night the patient was generally wakeful, but when he did sleep, he sweat profusely, in consequence of which, the skin became considerably cooler than it was before, though the tongue became clean, and the delirium disappeared.

July 14*th.* This morning, the patient was found in an extremely languid and weak state, but at the same time free from most of the uneasiness, which had hitherto attended his disease. The diarrhœa had abated, but was not entirely gone. The same internal medicines were directed that had been regularly employed the day previous, and an enema of four grains of opium in powder, was directed after every discharge from the bowels that might take place. Two only were needed before evening. During, this day, the skin became nearly of the natural warmth, the tongue became clean, but was very red; and the pulse was about 80, in a minute. The night was passed comfortably, under the same course. No opiate enema was needed.

July 15*th.* This morning there was considerable improvement in the general condition of the patient, and he was considered so free from disease, that the tincture of opium, and the liquor of the arsenite of potassa, were omitted, and half a fluid ounce of the compound tincture of cinchona, was directed in their stead. The same medication in other respects was continued, and the day and night passed well.

July 16*th.* The patient still improving. The intervals between the doses of opium, were now protracted to three hours, and the same was done with respect to the doses of the compound tincture of cinchona.

July 17*th.* Still improving. The same medicines continued, but at intervals of four hours.

July 18*th.* Still better. The same medication, but at intervals of six hours.

July 19*th.* Still better. All the medicines hitherto employed, were now abstracted, and the patient was put upon a mixture of one drachm of cinchona in powder, with a glass of wine, four times a day. The petecchiæ are not yet entirely gone, though they are now fast disappearing. The patient now has a good appetite, walks out, and is rapidly recovering his wonted strength. Discharged.

Case of Miss A—— C——, ætat. 30.—This patient had for a long time laboured under Ayre's dyspeptic or hepatic marasmus; and for several days previous to the attack of her disease, had been more or less in attendance, both night and day, upon sick friends, beside labouring unusually hard the day immediately preceding, in washing. On that day, she took (without advice) a common cathartic dose of tincture of aloes and myrrh, but it produced no operation upon the bowels.

July 15*th*, 1825. In the morning she was suddenly attacked with pain in the *heel*, which by paroxysms, was extremely violent. It is always a very unfavourable case, and very often fatal, when the patient is attacked at first with excruciating pain, confined to a *small* spot, as the heel, finger, toe, or ear. Such pains sometimes are in the uterus, bowels, or chest, and occasionally shift suddenly from one part to another. These painful parts, when on the limbs or extremities, sometimes become rapidly gangrenous, and occasionally slough off to the bone, resembling very acute cases of necrosis. During the remission of this pain, she had hysterical delirium, with incessant loquacity, and alternate laughing and crying, without adequate cause. There was no medication at all till 5 o'clock, P. M., when her physician arrived. At this time, her cheeks were of a deep livid colour, while the rest of her face was preternaturally pale; the skin was preternaturally cool, and rather dry; the tongue was covered with a slight thin fur, and was contracted and pointed; the respiration was like that of a person who had been making violent bodily exertion; the pulse was weak and soft, and about fifty beats in a minute. Strong epispastics were immediately applied to the forehead, between the shoulders, and on each wrist. Horse-radish leaves, dipped

in hot water, were applied to the feet and legs, and forty minims of tincture of opium, five of the liquor of the arsenite of potassa, and five of strong spirit of pepper-mint, were given every two hours. Hot spirit and water, and hot tincture of camphor and water, were given *ad libitum*. In this way, about half a pint of spirit was taken in the course of twenty-four hours. Under this medication, the patient became much more comfortable, and continued so for the remainder of the day and night. The sleep was moderate and easy, the temperature of the skin rose nearly to its natural warmth; the pulse, though still weak, was as frequent as seventy-five in a minute; all pain was gone, the delirium was much less, the tongue remained as the day before, but there was so great torpor of the bladder, that the patient was entirely unable to void urine by voluntary effort.

July 16th. This morning, the symptoms were found much as they had been during the evening and night. Epispastics were applied to the inside of the thighs, for the relief of the torpor of the bladder; but in other respects, the same medication was continued. During the day, the symptoms continued pretty much at bay, and before evening, the torpor of the bladder was relieved. During the night, there was considerable restlessness, and more delirium

July 17th. This morning, the tongue was dark red, much dilated and flabby, and destitute of fur, the skin was considerably cooler, there was a profuse and exhausting sweat, the pulse was soft and weak, and about a hundred and twenty in a minute. Epispastics were now applied to each ankle, and two fluid drachms of officinal alcohol, diluted with a little hot water, were directed to be taken every hour, in addition to the previous course. Through the day the symptoms remained nearly stationary. In the evening there was considerable epigastric sinking. At this time, an extra dose of two grains of opium in pill, was administered. During the night, there was but little epigastric sinking. The other symptoms remained stationary.

July 18th. This morning, no new symptoms, and the previous ones were much at bay. The same medication was continued. Till twelve o'clock, M. the patient remained comfortable, and without change of symptoms. At this time, there was a severe paroxysm of epigastric sinking, but without any material change in the condition of the pulse, tongue, or skin. A large epispastic was now applied to the epigastrium, and an enema of three fluid drachms of tincture of opium, mixed with a little hot water, was administered. The same medication, in other respects, was continued. The afternoon passed more comfortably. About 9 o'clock, P. M., there was an increase of the delirium, with incessant loquacity, which lasted about an hour and a half. Between 10 and 11 o'clock, P. M. she suddenly sunk into a deep coma, which was mistaken by the attendants for fainting. At this time, the skin was cold, and drenched with sweat, the lips were purple, the respiration was interrupted, and resembled that which is entirely voluntary; there was effusion into the bronchiæ, throbbing or palpitation of the carotids, and other large arteries; but the pulse, though seemingly full on a superficial examination, was extremely weak and soft. An immediate application of mustard was made to the thorax, frictions were vigorously employed, and horse-radish leaves dipped in hot water, were applied to the extremities, but all with little or no effect. Life continued till about 1 o'clock, A. M. Just before death, there were two or three slight convulsions, which lasted a few seconds only.*

Case of Mark Mortimer Leavenworth, ætat. 25.—This patient was naturally a person of slender constitution, and rather feeble health. Having an early taste for literature and science, he was originally designed for an academical

* In each of the preceding cases, much injury was invariably produced by moving or raising the head, while the patient was in the lowest state. Epigastric sinking was the certain consequence. In general, the head was not shaved and blistered sufficiently early. As this process is attended with trouble, it is usually deferred so long as not to produce its full effect. In the worst cases, all the most efficient means should be employed, with the least possible delay.

education, which however, he was prevented from obtaining by a disease of the eyes, a semi-paralysis of the optic nerve, which was brought on by close application to study. He had been engaged for about three years in the study of medicine, and was only waiting for the expiration of the legal time, in order to be admitted to the degree of M. D. Immediately previous to the time of his sickness he was the pupil of Samuel B. Woodward, M. D. of Wethersfield, Connecticut, in whose practice he had witnessed several cases of the disease with which he was so soon to be seized.

On the 8th of July, he made a visit to Middletown, Connecticut, and was invited to remain a short time, as an assistant to one of the physicians of that place, who had more cases of the epidemic under his care, than he could well do justice to alone.

Tuesday, July 12th, 1825. After about three days' attendance upon the sick in this place, he complained about 9 o'clock A. M. of pain in the bowels, which was soon followed by a free liquid discharge, that produced great languor and sense of weakness. Two fluid drachms of camphorated tincture of opium, obviated these symptoms, and prevented any further evacuations from the alvine canal. About 12 o'clock M. while visiting a patient, he was suddenly seized with great vertigo, accompanied with faintness or sinking at the stomach, which were speedily relieved by three or four fluid drachms of compound tincture of cinchona. Upon this, he immediately rode home, and soon after ate, with much relish, a full dinner. The vertigo, and faintness or sinking at the stomach, occurred at intervals through the afternoon, and confined him to the house, but not to his bed. The paroxysms, however, were readily relieved by a little brandy and water. During the whole of this time, the pulse, tongue, countenance, and skin, exhibited no appreciable deviation from their customary healthy state. Towards evening he walked out a few rods, but was seized with faintness, which caused him to return and take to his bed, from which it is believed he never arose without assistance. In the evening he took a cup of tea, a little brandy and water, and a single grain of opium, which greatly relieved the vertigo, and epigastric faintness or sinking, the only symptoms of which, at this time, he complained. During the night, he took moderately of brandy and water, or of compound tincture of cinchona, as often as these symptoms occurred, and invariably with material relief. There was but little sleep, and that much interrupted.

Wednesday, July 13th. In the course of this morning there was double vision, the vertigo and epigastric faintness or sinking became much worse, and there was total inability to raise, or even move the head, without great aggravation of these symptoms. The pulse was still natural, as respects frequency and force, but had become quick; the skin was also natural, both as respects temperature and moisture; but the tongue had become flabby and pale, and was covered with a thin, light coloured fur; and the respiration was like that of a person who had just been making considerable bodily exertion.

It was now judged necessary to enter upon a regular course of medication, and the patient was accordingly put upon one grain of opium every two hours, with three fluid drachms of compound tincture of cinchona, and about the same quantity of brandy, suitably diluted, every hour. A little wine was occasionally taken at the pleasure of the patient.

During this day, the symptoms were much less perfectly controlled, than they had been the night previous. Towards evening, and through the night, there was considerable disposition to vomit, with occasional retching, for which about four extra pills of opium, each consisting of two grains, were taken at irregular intervals, and uniformly with great relief. During the night there was but little sleep, and that imperfect and unrefreshing.

Thursday, July 14th. Double vision, vertigo, and epigastric faintness still continue, but with some abatement, especially of the last. The pulse, skin,

and tongue, are much as the day before, but the respiration is nearly natural. During the regular morning aggravation of symptoms, epispastics were applied to the forehead, and the sides of the head. The same quantities of opium and alcohol, that were used the day before, were continued. In the afternoon, without any appreciable change in the external symptoms, the patient felt more comfortable, but on account of a slight uneasiness in the bowels, a casual medical visitor advised a laxative enema. Instead of this, one of a drachm or two of laudanum was given, which instantly relieved. Although there was neither fulness nor hardness of the abdomen, even in the slightest degree, but on the contrary, a perfectly soft, and rather lank state, yet some hours afterwards this advice, at the wish of the patient, was complied with, and a decoction of tansey and ginger, to which was added a little common salt and lard, was administered. About this time, from the suggestion of a counsellor of much experience, and good judgment in such cases, an aromatic infusion of gentian, was substituted for water, for the purpose of diluting the compound tincture of cinchona, and instead of the brandy and water, a table spoonful of a mixture of equal parts, brandy, lime-water, and boiled milk was employed. As after some hours, the same uneasiness in the bowels returning, and no evacuation having taken place, another enema, prepared in the same manner as the first, but with the substitution of a fluid ounce of castor oil for the lard, was administered. About half an hour from this time, there were two moderate evacuations, which were immediatly followed by a considerable increase of vertigo, and epigastric faintness, troublesome palpitation of the heart, aorta-descendens, and carotids, great restlessness, and slight delirium, together with a difficulty of retaining any thing upon the stomach. On the occurrence of these symptoms, an enema of two fluid drachms of tincture of opium, diluted with a little tepid water, was immediately administered, an epispastic was applied to the region of the stomach, and the regular dose of opium was increased from one grain, to a grain and a half. On account of the irritability of the stomach, it was necessary to omit the compound tincture of cinchona, and the aromatic bitter infusion, and to get down the mixture of brandy, lime-water, and boiled milk, as the stomach would receive it, but without any regularity. During the night, several extra pills of opium, of two grains each, were given at irregular intervals, as the urgency of symptoms required. Under this course, there was a considerable abatement of the immediate urgency of the symptoms, and upon the whole the patient slept considerably more, than for any night previous, though the naps were short, and the patient was easily roused.

Friday, July 15th. This morning the patient was better than the evening preceding, but not so well as the morning previous. The vertigo was still considerable, and there was total inability to move the head, without great augmentation of it. There were, however, only occasional paroxysms of epigastric faintness, and these very moderate. Troublesome palpitation of the heart, aorta-descendens, and carotids, occurred occasionally, always accompanied with considerable restlessness. The skin was cool, and very sweaty, and the pulse was soft and feeble, and as respects frequency, it fluctuated between 80 and 110.

A grain and a half of opium was now given, every two hours; and every fifteen minutes, a table-spoonful of the mixture of brandy, lime-water, and boiled milk. Nourishment hitherto, though taken with considerable freedom, had been given rather irregularly. Chicken broth had been tried, but milk porridge was preferred. A table-spoonful of the latter was now directed to be invariably taken after each dose of the brandy mixture, and frequently a table-spoonful of coffee, was allowed in addition. During this day, in consequence of special exacerbations of the vertigo, palpitation, and restlessness, three enemata, each consisting of two fluid drachms of tincture of opium, and two extra pills of opium of two grains each, were necessarily administered, each of which produced the most obvious relief of the symptoms for which

they were employed, for the space of two hours. This day there was so great torpor of the bladder, as to prevent a voluntary discharge of urine, but when the catheter was employed, this excretion was found to be natural, both in appearance and quantity. As extra doses of opium were so often necessary, in order to meet urgent symptoms, it was this evening judged expedient to increase the regular dose (which was given every two hours,) to two grains; and on account of a disrelish for the taste of brandy, old spirit was substituted, and a mixture was made of two parts spirit, one part lime-water, and one part boiled milk, which was likewise given in doses of a table-spoonful, and followed by the same quantity of milk-porridge, and occasionally the same of coffee. The night passed much more comfortably than any previous one, since the commencement of the disease. The sleep during the whole twenty-four hours, was less than natural, but more quiet and refreshing than it had ever been before. It was still necessary, however, to keep the head low, and motionless. During the day and night of the 15th, the patient vomited but twice.

Saturday, July 16th. This morning, the symptoms were more at bay, and the patient more comfortable, than any morning since the attack. During the customary apyrexial aggravation of the forenoon, beside restlessness and palpitation, there was some delirium. An enema of two fluid drachms of tincture of opium, was immediately administered, the whole top of the head was shaved, and a strong epispastic was applied. The enema not proving sufficient, two extra pills of opium, of two grains each, were given, before the restlessness and palpitation were obviated. When the epispastic began to produce its effect upon the surface, the delirium speedily disappeared. In the afternoon, there was a very obvious mitigation of all the symptoms, and the patient was still more comfortable, than in the morning. For the first time since the attack, the patient was now carefully lifted to another bed. This produced a considerable aggravation of the vertigo, and a recurrence of the epigastric distress and palpitation, for which, there was given with speedy relief, an extra pill of two grains of opium, and an enema of two fluid drachms of the tincture.

Sunday, July 17th. This morning, the symptoms in general were alleviated still further than on the morning previous, though there was still inability to move the head without troublesome vertigo. The regular forenoon deterioration required this day, for its relief, two extra pills of opium, of two grains each. At this time, it was judged expedient to enter upon the use of the liquor of the arsenite of potassa, as a supportive and invigorating agent, and accordingly two minims were given with every regular dose of opium. Otherwise the course, both as respects medicine and nourishment, which had been pursued for the two days previous, was continued. The night passed as comfortably as any one since the attack, if not more so.

Monday, July 18th. This morning, as for three mornings preceding, there was a mitigation of the symptoms, in comparison with most of the day previous. The forenoon aggravation, however, required two extra pills of opium, of two grains each. During the day, some uneasiness in the bowels was complained of. On examination, the abdomen was found to be still free from hardness, fullness or tenderness, but on the contrary, it was actually soft and lank. An enema of two fluid drachms of tincture of opium, entirely obviated all complaint. This day passed comfortably, as there was less vertigo, palpitation, and restlessness, than usual. Toward evening, the patient was again removed to another bed, which, as usual, occasioned a recurrence of troublesome symptoms, viz. vertigo, palpitation, and restlessness, and rendered another enema of two fluid drachms of tincture of opium, and an extra pill of two grains, necessary, before the patient could be rendered as comfortable as before. In the course of the afternoon vomiting happened once, and that not long after a dose of the liquor of the arsenite of potassa. As the patient confidently ascribed this effect to that medicine, though pro-

bably without reason, it was judged expedient to discontinue it. The night passed comfortably, and without any extra doses of medicine. The regular course was continued unchanged.

Tuesday, July 19th. This morning the patient was much as on the preceding. For the purpose of anticipating and preventing the usual forenoon aggravation, an enema of two fluid drachms of tincture of opium, was given early, and with the desired effect. No extra pills were found necessary. About noon, the patient was visited for the first time during his sickness by his father who lived at a distance. The agitation produced by this meeting, rendered another enema of two fluid drachms of tincture of opium necessary, in order to allay the increased vertigo, palpitation, and restlessness. The regular medication was continued unchanged. This night, for the first time, was bad attendance. The watcher slept, and of course was irregular, and repeatedly neglectful, in administering both food and medicine, and finally left the house where the patient was, before either the nurse or the family were up.

Wednesday, July 20th. The patient was worse this morning, than on any morning since the fifteenth. From that time to the present, the pulse had varied in frequency, from eighty, to a hundred and twenty, in a minute, and had been soft and weak. The skin had been somewhat cooler than natural, and rather more sweaty than was desirable. The quantity of sleep for the twenty-four hours together, on the whole, had been less than in health, but it consisted of short, quiet, and apparently refreshing naps, from which the patient was easily roused. If suffered, however, to continue more than about ten minutes, they became laborious, and seemed to produce fatigue and exhaustion. During this period, the tongue had gradually assumed a thin, but close, sordid, and brown fur, which, however, was uniformly moist. No special thirst had been complained of. The aggravation of symptoms at the present time, consisted in increased vertigo, palpitation, and restlessness; in reduced temperature of the skin; and in an increase of the frequency of the pulse, to about a hundred and thirty in a minute. An extra pill of three grains of opium, and an enema of three fluid drachms of the tincture, were given in the course of the forenoon, with the effect of restoring the patient, very nearly if not entirely, to the situation in which he was, the day previous. During the day, it was judged expedient to take some measures towards moving the bowels, not because there were any further indications for this step from the condition of the bowels themselves, but merely from the length of time they had remained unmoved. In reference to this point, simple water was substituted for the lime-water in the spirit mixture, and about a scruple of the carbonate of magnesia was given at a dose, three times, at nearly equal intervals, during the day. As however, the patient complained in each instance, after taking it, of considerable uneasiness in the stomach; and as there was an increase of the vertigo, languor, and restlessness, during the afternoon, contrary to the usual course of the disease, and as the tongue was gradually becoming more flabby, and as the edges from which the fur was now beginning to be removed, were more pale than at any time previous, it was on the whole judged expedient, to relinquish the carbonate of magnesia, before it should produce any evacuation, and to add ten minims of strong spirit of pepper-mint, to each dose of the spirit mixture, and likewise to administer an enema of two fluid drachms of tincture of opium. The latter part of the day, the patient was as comfortable as usual, till just at evening another aggravation of symptoms was produced, by changing the shirt. This rendered another extra pill, of two grains of opium necessary, and another enema of two fluid drachms of the tincture. About 11 o'clock, P. M. the patient was consigned to the care of the attendant for the night, in as favourable a condition as had been usual, at that time, for several days. About 1 o'clock, A. M. a physician, who slept in an adjoining chamber, was called, on account of a slight discharge of blood from the urethra, in consequence

of the introduction of the catheter, which had still continued to be necessary, though it had always been performed by the patient himself. This symptom being explained to the satisfaction of the attendant, the general condition of the patient was examined. Unexpectedly, the pulse was now found to be very small, weak, and soft, and as frequent as a hundred and sixty in a minute, the beat being peculiarly short and quick. The temperature was soon considerably reduced, the countenance became sunken, there was increased vertigo, and a confusion of mind, almost amounting to delirium. An extra pill of opium, of two grains, was immediately given; and the regular dose was increased to three grains. The spirit and nourishment, were continued as heretofore.

Thursday, July 21st. This morning, the patient was in a very low state; but in comparison with the latter part of the night, somewhat improved. Two grains of opium, were now given every two hours; and at every intermediate hour, forty minims of the tincture, in conjunction with five minims of spirit of cinnamon. Two additional epispastics, were applied to the sides of the head. Through the day, the symptoms remained nearly stationary. At evening, the patient was in a very low state. During the night, he vomited several times; after which, for a few moments, there would be furious delirium. During the whole time, there was great restlessness and jactitation. Toward morning, there was a kind of epileptic tremor; after which, and about sunrise,

Friday, July 22d, dissolution took place.

REMARKS.

In connexion with the statement of the preceding case, it ought to be remarked, that from the fact that Mr. L. had a physician constantly by him, his symptoms were barely met and obviated as they occurred, but were rarely or never anticipated and prevented, which is always necessary to insure a favourable crisis in the bad cases. At any rate, the treatment was always a little behind the progress of the case. It is not however very probable, that he could by any means have been saved, considering the slenderness of his previous health, the feebleness of his constitution, and the severity of his disease. Notwithstanding these circumstances, so powerfully were the symptoms met, between the third day and the ninth, that strong hopes were entertained of his recovery. Indeed, most of the time from the attack to the final sinking on the ninth day, a physician not conversant with the disease on a call of ten minutes, would have been liable to form a very erroneous judgment of the real danger of the case, on account of the promptness with which the symptoms were met, and the degree with which they were capable of being controlled. On close inspection, a considerable number of petechiæ, were visible on the face and neck, but they were not so prominent as in many other cases. This case, as well as the preceding, occurred in the hottest season ever known in this climate. In spite of every effort to preserve a comfortable temperature, in the rooms of the sick, the mercury of the thermometer stood from 90° to 94° several hours every day, for a great part of the month of July, 1825.

It may be proper further to remark, that in so much of the preceding cases, as occurred from the 8th to the 12th of July, 1825, great assistance was received, in making out this report, from the very accurate minutes made on the spot by our deceased friend, who for that short time, proved to be a very valuable assistant to the attending physician.

Since the prevalence of the present epidemic in this and the adjoining towns, it has proved very fatal to the medical profession. Dr. Warner at Haddam, Mr. Leavenworth in this city, Dr. Catlin, at Durham, and Dr. Ward, at Berlin, have all fallen victims. [Dr. Wooster of Lyme, and Dr. Cornwell of Hamden, also died of the epidemic of 1825. We lost several other va-

luable physicians the same year, besides having a large sick number who recovered. Dr. Fowler, of Washington died of this disease, in 1826.]

Previous to printing the *addenda*, the following letter was received from that veteran practitioner and author, the venerable James Thatcher, M. D. A. A. S. of Plymouth, Mass. the friend and medical associate of Brooks and Eustis, under Washington, and author of the American Dispensatory, and of the American Modern Practice, &c. &c. &c.

Thomas Miner, M. D. Middletown, Connecticut.

Plymouth, August 18th, 1825.

Dear Sir,

Through your politeness, I have been favoured with your ingenious pamphlet on *Typhus-Syncopalis*, for which I beg leave to proffer my respectful acknowledgments. Not having been fully satisfied with any treatise on that formidable disease, I commenced the perusal of yours with peculiar interest and solicitude. From a knowledge of the medical character of the author, my expectations were such as to excite a particular attention to every sentence, and permit me to indulge my feelings, by expressing my unqualified praise and approbation. Your just description of the disease in its various forms, and judicious mode of treatment, afford me a peculiar satisfaction, and I hope the book will be extensively circulated, both on account of the author, and the instruction which it cannot fail to impart to the young and inexperienced practitioner. I shall take pleasure in putting it into the hands of my neighbouring physicians, and presume it will escape the hand of *criticism so unjustly bestowed* on a former occasion.

I am with much respect,

Your obedient servant,

JAMES THATCHER.

ADDENDA No. 2.

The following case and remarks by the author, are extracted from *Essays on Fevers and other Medical subjects*, by Thomas Miner, M. D. and William Tully, M. D. page 114.

" SPOTTED-FEVER (PHRENITIS-TYPHODES.)

" *Sunday, January*, 28, 1816, one o'clock, P. M. I was called to visit, in consultation, J. N. Y. aged seventeen years. The first sight of the patient struck every beholder with horror. He was as stupid as a block, unconscious of any impression on either of the senses, and so convulsed, that it required three or four men to hold him on his bed. His eyes were open, and rolled back, so far as to hide the coloured part, and his teeth were as firmly clenched, as in locked-jaw. His face, arms, legs, and body were literally covered with spots, somewhat resembling, in appearance and colour, gunpowder shot into the skin; though in several places, they run together in patches, from the size of a cent, to that of the palm of the hand. The coldness of death pervaded the whole body, except the parts which had been warmed by external heat, and there was no pulse in either wrist. The convulsions, though they continued most of the time, would occasionally remit, so that there was, now and then, a slight relaxation of the jaws, sufficient to introduce the end of a spoon; and though he remained insensible, after his throat had been irritated, a few seconds, by some liquid, he generally swallowed the greater part of it. During these relaxations, he parted with his fæces profusely, and lay drenched in accumulated filth.

" The previous history is as follows:

"The patient, an apprentice to a smith, had been employed the Friday before, in a very warm shop, assisting in tempering sword blades. On Saturday morning, the weather being extremely cold, he went a mile from home, and was much chilled; but on his return, performed his usual labour in the shop, till near night. Towards sunset, he complained of severe pain in the head, sore throat, loss of strength, coldness, and that indescribable anxiety, which the sick term distress, in distinction from acute pain. His sister, who was his nurse, very properly administered an infusion of some aromatic herb, sent him to bed, and applied external heat, till free perspiration was produced. He seemed much relieved in the evening, and about ten o'clock, went to sleep. A man was left with him, to watch his symptoms, and furnish him with drink. He slept tolerably well, and nothing peculiar was remarked, except when he awoke, in the night, he was thirsty, and drank, it seems, freely of *cold* drink. About four or five o'clock in the morning, he was found to articulate with difficulty and incoherence, and delirium was soon perceived. The spots were now discovered. A physician was called, who came about seven o'clock. An antimonial emetic was administered, which operated two or three times slightly, and soon produced the catharsis, under which he was *still* labouring, when I first saw him. Little else appears to have been done, except the application of a blister to the region of the stomach, with frictions, fomentations, external heat to the limbs and body, and occasionally, administering warm aromatic drinks.

"Though the case appeared to be hopeless, I advised the use of laudanum, and brandy and water, and remained with him about an hour and a half, to watch their effects. During this time, the diarrhœa was checked, and a weak pulsation returned to the wrists. Being now obliged to leave the patient, I can only state, that he is said to have had no peculiar change of symptoms; but he became more and more exhausted, and died at one o'clock in the night, after an illness of about thirty-two hours.

"REMARKS.

"I could mention another, that I witnessed, a few days afterwards, which proved fatal, in an hour and a half, after there was sufficient alarm to call a physician, and within six hours, from the first apparent indisposition. No medicine, except twenty-five minims of laudanum, and warm mint tea, was attempted to be administered. The skin had a marbled, motley appearance, but no petecchiæ. I saw a third, the same season, who died in eighteen hours. He had no spots. These cases were so palpable, and so little medication was employed, that no one suggested, that they were killed by the stimulating practice. Many others, to appearance, equally severe with the first case, could be stated, which were cured by a timely recourse to proper treatment.

"Spotted-fever appears to have its seat and throne in the brain, to belong nosologically to the passive phlegmasiæ. It is attended with no spontaneous re-action, but has the forming and supporting stages blended together. This is manifest, by the greatest arterial debility, typhoid delirium and convulsions, paroxysms of *subsidentia*, and in a word, by every symptom, which is known to indicate an extreme deficiency, or exhaustion, of the powers of life.

"By an energetic, exciting treatmeat, at its access, this disease is frequently broken up, within twenty-four hours. When we fail in producing a resolution, and only make such an impression as to moderate the violence of the symptoms, it usually continues seven, or in some instances, fourteen days, requiring the same course of practice, according to the urgency of the symptoms, as is demanded in the supporting stage of typhus.

"One circumstance should be noted. Though the body, when coldness prevails, should be warmed by external heat, fomentations, vapour, or warm-bath, and it is desirable to produce and keep up a moderate diaphoresis, yet

there is much hazard from excessive sweating. Indeed, it is not a rare occurrence, to find morbid sweating, through the *whole course* of any low, typhoid fever. The great difficulty in treating successfully such rapid diseases is, that the physician, too often, is not called till so late an hour, that he finds all the powers of life exhausted, and the patient already in the agonies of death.

"Spotted fever, like other epidemics, has almost infinite gradations in its rapidity, severity, and mortality. In some seasons, and in individual cases, it is comparatively mild; in others, it is much more rapid and fatal than the cholera of India, or the plague of the Levant. No foreign author, it is confidently believed, has ever described this disease. We occasionally see the typhus-petechialis of nosologists, but it differs very essentially from the spotted-fever of New England."

Epidemics.—In page 437 of the work just referred to, professor Tully, in full accordance with the sentiments and observations of the present author, thus very justly and forcibly expresses himself upon the subject of epidemics. "The causes of the rise, progress, diffusion and final extinction of epidemics, are, in our opinion, involved in *impenetrable* obscurity—at least in the present state of medical science. Nor are the laws that regulate them in these respects, *at all* ascertained. The dreams of visionary men upon this subject, have amused both themselves and the world, but hitherto have only served to render the darkness more visible. Whatever may have been our progress in the investigation of *endemic* causes, it is certain, that except negatively, we have not advanced a single step, in tracing those which occasion *epidemics*. When we assert, that any region is salubrious, we intend nothing more, than that it is free from *endemics*. On the contrary, no local situation, however healthy in general, can ensure exemption from the ravages of *epidemics*. Cynanche maligna, pneumonia-typhodes, spotted fever, and especially simple typhus, may, for aught we know, become the scourge of every section of the globe. Neither native forests, nor well cultivated country, nor the most rugged and mountainous, nor the most pleasant and level districts, have any certain exemption from their ravages. Like that portion of territory described by Dr. Miller, many parts of Connecticut, which are ordinarily the most salubrious, have been most severely visited, with the epidemics of the last fifteen years. On the other hand, individual limited districts will occasionally remain healthy, without any assignable cause, while the surrounding country is devastated with sickness. Nor do times and seasons, heat and cold, appear to have any effect with respect to their appearance, except as regards the *exciting* causes. They have been known to prevail in every month of the year.'

We take a pleasure in republishing from the Quebec Medical Journal, the proceedings of the faculty of Quebec, towards the formation of a Medical Society. Whilst we rejoice at the spirit of improvement manifested in this interesting portion of the western continent, we doubt not that the medical society now formed, will advance the interests of science, and reflect the highest honour upon its founders.

THE QUEBEC MEDICAL SOCIETY.

The year which has just elapsed will form a memorable era in the scientific history of Canada, as it has given birth to the first attempts which have been made with the view of opening a free intercourse with the literary world, and of promoting the interest and cultivation of medical science within the limits of our country. It is indeed a happy circumstance which makes it our lot to announce to all our countrymen and to the medical world the formation of a Medical Society in Quebec, whilst we can bear evidence to the spirit of concord and unanimity which presided at its organization.

A perusal of its by-laws and regulations will no doubt be read with satisfaction, and we beg leave to call the earnest attention of all the Profession in Canada, to the advantages which are now opened to them of cultivating, through that medium, a friendly intelligence with all its members, which cannot fail to prove serviceable in many instances.

Every branch of scientific inquiry is yet unexplored in Canada, and an ample harvest will reward the exertions of the attentive observer; and we believe that nothing could prove a more powerful and efficacious excitement towards the further cultivation and improvement of the various branches of the science of nature and of art, than the spirit of liberality which is so prominent throughout all the rules of the society. No distinction of person or country, no favourite school or graduation, in fine no particular prerogative of age, birth, language or education, which might be made the tools for persecuting talents, can be expected to give any consideration in the Profession which will not exclusively be the reward of true merit.

Under such favourable auspices, we must hail the formation of the Quebec Medical Society, as one of the most remarkable events in the scientific history of Canada, which will ever be remembered with pleasure by all those who from a true and pure love of Canadian literature, may in years to come, experience the beneficial influence of a Society intended for the further progress of the natural sciences, the fundamental and only basis of the science of the Physician.

At a general meeting of the medical practitioners of Quebec, held on the thirty-first of November last, Dr. Joseph Morrin in the chair, the following resolutions were proposed and adopted:—

That of all the various classes of society which have a direct influence on the prosperity of the state, the Medical Profession having for its object to ensure comfort and happiness to every individual, must be considered as the most beneficial to mankind.

That it becomes the duty of every member of that profession, to unite all their efforts in promoting the science by which such a laudable object may be attained.

That the improvements which have lately taken place in the profession of medicine in this country, enforce on its members the necessity of adopting such measures as may ensure the further support and protection which the interest of Medical Science imperiously requires.

That it is the opinion of this meeting, that this desideratum can be effectually obtained by an association of Medical Gentlemen zealous to promote the cause of Medical Science in this part of his Majesty's dominions.

That the members here present do now jointly form themselves into that association, for the purposes above mentioned, under the name and denomination of *The Quebec Medical Society.*

That the following resolutions be adopted as the standing rules, by-laws, and constitution of the Society, which shall remain permanent, immutable, and irrevocable for the space of five years, and to which all members present, and those who may in future be added to their number, shall be bound to conform themselves as members or officers of this Society.

Resolved unanimously:—

I.—That the members present do hereby constitute themselves into a permanent association to be hereafter designated under the name and denomination of The Quebec Medical Society, the sole object of which is, and shall always be, the dissemination and improvement of the various branches of Medical Science, viz: Natural History, Botany, Chemistry, Pharmacy, Materia Medica, Physic, Surgery, Anatomy, Physiology, Medical Jurisprudence, Medical Police, and the Obstetric Arts.

II.—That this Society shall hold its sittings on the first Monday of every month, to which all members shall duly and regularly attend, except on urgent business; and in case it be a holyday, the sitting will be had the next day.

III.—That no person, except the members and honorary members, shall, under any pretence whatever, attend any of the sittings, unless especially introduced by the President or the Vice-President, the Secretary, and one of the members; but such person thus introduced shall not be allowed to take any part in the proceedings of the Society.

IV.—That one President and one Vice-President be appointed annually, at every annual sitting, which shall be held on the first Monday of December of every year, which appointments shall be made by a majority of the votes present.

V.—That the duty of the President shall be, to preside at every sitting, and to maintain order and decorum; he will be allowed to take a part in the debates like all other members, and at the expiration of his office, shall deliver to the Society an address on some medical subject, which shall become the first order of the day, after the minutes of the last meeting shall have been read; and all such addresses shall be kept as records of the Society, to be published by its order.

VI.—That the duty of the Vice-President shall be, to preside in the absence of the President, subject to the same observance, and endowed with the same privileges as the President himself; the same rule to be observed, whenever, in the absence of both, any other member shall take the chair; but when the President shall attend, the Vice-President shall then take his seat with the other members of the Society.

VII.—That a Secretary be named whose appointment shall be perpetual, and in case of his resignation or death, his successor shall be appointed by a majority of three fourths of all the members of the Society. His duty shall be, to preserve all records, documents, and transactions of the Society; to correspond on the part of the Society, with all Medical Societies, Universities, Academies, Colleges, or other Medical or Scientific Associations or bodies in any country, or with any individual out of the Society, whenever such cor-

respondence or connexion may appear convenient and practicable, or otherwise useful to the objects of the Society.

VIII.—That all communications, documents, papers, presents, or other objects which may be forwarded or presented to the Society, by or in behalf of any Medical or other Scientific Association, body, or individual, or by any person whether a permanent or honorary member, who shall not communicate it personally, shall be addressed to the Secretary, who will submit them to the Society in a due form; or such may be presented by any one of the members, in behalf of such Association, body or individual; except where the object shall be a regular or essential document of the Society, in which case it shall be delivered into the hands of the Secretary, as the proper channel through which the Society should receive it in an official manner.

IX.—That no person shall become a permanent member of this Society, unless he shall have been proposed by one of the members at a monthly sitting, to be balloted at the ensuing meeting; and if two thirds of the votes be affirmative, such person shall become a member, and if less than that number, he shall be rejected. Provided always that the member proposing him, shall show to the satisfaction of the Society, that such person is a qualified practitioner according to the intent and meaning of the laws of this province, and that he is actually in practice or residing in, or within a distance of twelve miles of, the city of Quebec.

X.—That no person shall become an honorary member, unless he shall have been proposed at a monthly sitting, to be balloted at the ensuing meeting, and a majority of the votes present shall be sufficient to admit him, otherwise he shall be rejected.

XI.—That whenever a person shall have been rejected after having been balloted, he shall not be again proposed within the space of one year, but if such person should have been rejected for the want of any of the above qualifications, he shall never be proposed the second time, unless it be satisfactorily proved that he has since acquired such qualification.

XII.—That whenever the President, or the Vice-President shall not attend, the senior member present shall preside ad interim.

XIII.—That it shall be the duty of every member to present alternately a paper on some Medical subject. The senior member shall begin, and at every subsequent meeting each other member shall follow his example from his seniority, and thus in rotation. The President, Vice-President, and Secretary, or all other officers of the Society shall also be included in this performance. And it shall be the duty of the Secretary to give notice, at every meeting, to the member whose duty it shall be to present his paper, and in case of such person being absent at the meeting when his paper is to be presented to the Society, he shall cause the same to be delivered in time to the Secretary, who will then read it in his place; and all such papers shall become the first order of the day after the minutes of the last meeting shall have been read. They shall also be kept as records of the Society, to be published by its order.

XIV.—That the modes of voting at any resolution shall be the signal voting and the balloting. The signal voting shall be dictated by the President, and it shall be competent for the Society to use that mode of voting with the unanimous consent of all members present; and the balloting shall be had recourse to on the call of one of the members who shall not be bound to give any explanation for so doing. The balloting shall be in such a manner as every one may give his vote in secrecy; and when the votes are all given, the Secretary shall then collect and report them in the presence of all the members, and enter the same accordingly in the minutes. Provided always, that in all cases where the name of one Medical or other Gentleman may have been mentioned, who may be at all interested in the event of the resolution, no other mode of voting shall be adopted on all such occasions, than the balloting. Except when it shall be necessary to appoint a Presi-

dent, Vice-President, or any officer which the Society may think proper to appoint in future, in which case every member shall give his vote separately in writing to the Secretary, who will then declare the person or persons named or appointed.

XV.—That four members, including a President and the Secretary, shall constitute a Quorum, competent for transacting all affairs and business of the Society.

XVI.—That it shall be competent for the Society to determine, at any future period and by a majority of the votes present, the propriety of raising a subscription fee from all the members, in order to procure plates, printings, stationary, books, pamphlets, or any other article required for its use, or for the further and proper execution of its object.

XVII.—That no conversation, discussion or motion, bearing on any political or other subject foreign to any of the objects of the Society, as mentioned in the above resolutions, shall, at any future period of its existence, be allowed during any of its sittings; and in case of the person thus proposing such conversation, discussion or motion, refusing to obey the call of order by the President, he shall immediately be dismissed from the Society, and declared incapable and unfit to be again proposed as one of its members.

XVIII.—That no other right or privilege than those provided for in these resolutions, shall ever be understood to be invested on any of the members and officers of this Society, whether they relate to any right or immunity appertaining to any one, in whatever capacity he may be acting; or whether they refer to any species of control of opinion or person over any one of the members, who are all to be considered as perfectly independent of one another, but one is to be dependent on the whole, in as much only as will be essential to the maintenance of order, decency, and decorum.

XIX.—That it shall be competent for the Society to appoint at discretion, Committees for inquiring and reporting on any subject which the Society might, at any time, think proper to investigate; which Committees shall be appointed in the same manner as provided for with regard to all other officers of the Society; they shall in all their proceedings strictly conform themselves to all the rules and regulations of the Society, subject to the same observance and endowed with the same privileges as the Society itself, in as much as may be necessary to good order and decorum, or to the prosecution of their labour. Provided always that, whenever any question shall arise which may relate to any prerogative or to the interpretation of any of these rules and by-laws, they shall proceed no further but call an extraordinary meeting of the Society, and lay before it the question or difficulties at issue, upon which the Society shall proceed and determine according to the literal and true meaning of these rules and by-lays.

XX.—That it shall be competent for any two members to call an extraordinary meeting of the Society, by applying and submitting their reasons to the Secretary, who shall then make them known to the President, whose duty it shall be to give immediate order to the Secretary to call such extraordinary meeting, dictating also the time when it shall be held.

XXI.—That it shall be in the power of any one of the members, to introduce any of his friends and acquaintances at all annual sittings of the Society, but such person thus introduced shall not be allowed to take any part in the proceedings or transactions of the Society.

XXII.—That no proposal or motion tending to alter, destroy, or amend, any of these rules and by-laws, either in their tenure, meaning, or effect, shall be proposed to this Society, before the expiration of five years from this date; and any such proposal or motion then made, shall be delivered in writing, and deposited with the society for the inspection of the members, during the space of three months, before the society shall proceed upon it: and all such proposal or motion shall be adopted by a majority of three fourths of all the members of the society, members absent being allowed to vote by

proxy, or by sending their vote in writing to the secretary; and should it be once rejected by the want of such majority, it shall not be again proposed.

XXIII.—That it shall be competent for the society to make and adopt, at any future period, such rules and regulations, or appoint such additional officers, as may be considered useful; and all resolutions once adopted, shall not be liable to be altered or repealed before the lapse of twelve months from the date of their adoption. Provided always, that all such proposed motions or regulations shall be consonant with the true spirit and meaning of these rules and by-laws.

Monday, 4th December, 1826.

Resolved, That Dr. Joseph Morrin, be elected President, and Dr. Charles Norbert Perrault, Vice-President, of the Society, for the present year; and that Dr. Xavier Tessier be appointed Secretary, according to the seventh article of the by-laws of the Society.

That Dr. Xavier Tessier be requested to announce in the next number of the Quebec Medical Journal, the existence of this Society, and give publicity to the rules and constitution by which it is to be governed; and that the thanks of the Society be presented to him for this favour.

JOS. MORRIN, President.
C. N. PERRAULT, Vice-President.
XAV. TESSIER, Secretary.

MEDICAL LECTURES.

We are not a little gratified to witness the spirit for improvement which is rapidly spreading among the members of the profession. Within a period of twelve months, Quebec has to reckon the commencement of a Medical Journal, the establishment of a Museum of Natural History by our active and intelligent countryman, Mr. Chasseur; the formation of a Medical Society, and lectures are now given for the instruction of those who, in a few years, may contribute their share towards the perfection of all these important objects.

Our friends at Montreal, although wanting some of the above institutions, have also felt the impulse imparted to genius, for the cultivation of science, as we have the pleasure to witness the efforts which are making to render the profession respectable and truly useful to mankind. Four medical gentlemen, viz. Drs. Caldwell, Robertson, Stephenson, and Holmes, have, since a few years, been engaged in giving lectures on various departments of Medical Science, and the success which they have encountered, is a flattering testimony of their qualifications to the task. We must, however, deplore that some defect complained of by the great majority of the profession in Montreal, should have given rise to a spirit of division which we fear is to be referred to political dissensions kept up by national prejudices.

Situated at such a distance, we are not sufficiently conversant with the grounds of complaint, to give an opinion; but we flatter ourselves, and we earnestly entreat our professional brethern of Montreal, to endeavour to make up by mutual concessions, to revive that friendly understanding without which the profession must be degraded in its members, and obstacles to their own improvement, daily and constantly renewed. Such is the high opinion which we entertain of their good sense, that we have no hesitation in expressing our hope that these unfortunate failures will soon give way to concord and unanimity. Fortunately for the profession, we are not similarly situated in Quebec, and not a dissenting voice has been raised, whenever the interest of the science was at all concerned. The lectures which are now delivering in the presence of the most distinguished characters both in and out of the profession, are a striking and gratifying evidence of the liberal dispositions of the medical practitioners in this city.

There are at present in Quebec two gentlemen delivering lectures on

Chemistry, and one on Anatomy and Physiology. Dr. Frs. Blanchet is lecturing at the Emigrant Hospital, and Dr. J. Whitelaw at the old Theatre.

To Dr. Blanchet, the profession is much indebted for his indefatigable exertions, both as a member of the legislature and as a medical man. In the former capacity, however, we must regret to say that his principles have sometimes differed from the majority of his brethren, but as a medical man, we are confident we express the opinion of all the profession in saying, that his unremitting efforts have not a little contributed to raise the profession to its present improved state among us.

Dr. Blanchet also has the credit of being the first Canadian medical author. His work on the application of chemistry to the science of medicine, was promising a very useful member to his profession; and we acknowledge with pleasure that an unremitting study of chemistry since that period, must render his lectures highly scientific and interesting to the hearer, should his age and unwearied occupations permit him to prosecute still further his exertions in cultivating a science in which he has rendered himself so proficient.

MEDICAL SCHOOL OF MAINE.

The medical school was established by an act of the legislature, passed June 27th, 1820. It is under the direction of the boards of trustees and overseers of Bowdoin College, and receives from the state $1,000 a year for the purpose of making additions to the library, cabinet, and apparatus. The medical lectures commence, annually, about the middle of *February;* and continue three months. The fees of admission to all the lectures are fifty dollars.

Candidates for the degree of Doctor of Medicine are examined by the faculty of medicine at the termination of each course of lectures. They must have devoted three years to professional studies, under the direction of a regular practitioner of medicine, and must have attended two full courses of lectures, the last of which must have been at this institution. They must pass a satisfactory examination in anatomy, physiology, chemistry, materia medica, pharmacy, midwifery, surgery, and the theory and practice of physic; and must publicly read and defend a dissertation on some medical subject. Those candidates, who have not received a collegial education, must satisfy the faculty of their proficiency in the Latin language and in Natural Philosophy.

Students are allowed free access to the library, which contains about 2000 vols. principally modern works, which have been selected with much care. The library also contains an extensive and valuable collection of plates, among which are the splended works of Albinus,—Vicq. D'Azyr,—Cloquet,—Home,—Scarpa,—Cooper,—the Bells, Baillie,—Bateman, &c. Many recent and approved works have been added since the last course of lectures.

The anatomical cabinet, which was received from Europe, and formed in part the private cabinet of the late Prof. Thillaye, of Paris, contains all the preparations, which will be found necessary for demonstrations, and embraces many valuable specimens in morbid and comparative Anatomy.

The chemical and philosophical apparatus is ample, and furnishes means for full courses of lectures on these subjects.

BERKSHIRE MEDICAL INSTITUTION.

Outlines of a plan for an Eye Infirmary and General Hospital, to be attached to the Berkshire Medical Institution, and proposed to be established in the town of Pittsfield.

The power of directing and regulating the affairs and concerns of the establishment shall be committed to a board of Managers, appointed annually by the Governors.

The Infirmary and General Hospital will derive support from life and annual subscriptions, and from the avails of such other funds as may be from time to time obtained. No person will be allowed to have any private or individual property or interest in the establishment; except such as may be necessary on account of a deficiency of the funds, in which case it shall, for the time being, be subject to the control of the managers, as if it were public property.

Governors.—Any person subscribing one hundred dollars or more, shall be a Governor for *life*, and have at all times the privilege of keeping two patients under the treatment of the surgeons or physicians of the Infirmary, &c., and of voting for and being eligible to the office of manager.

Any person subscribing fifty dollars, shall be a Governor for ten years, and have the same privileges as a Governor for life, during that period.

Any person subscribing twenty-five dollars, shall be a Governor for five years, and have the privilege of voting for Managers, and be eligible to that office, and of keeping one patient in the Infirmary, &c. during that period.

The rights and privileges of annual subscribers shall be settled by the Governors. All subscriptions and donations of sums, other than annual subscriptions, shall be appropriated, first, for fixtures, apparatus, and furniture; secondly, for a permanent fund, the income only to be appropriated to the current expenses of the Infirmary, &c. in which shall be included moneys paid for the board of indigent patients, whenever the funds shall allow of such an appropriation.

No patient shall be admitted as a charity patient, without producing a certificate from the select men of the town whence he comes, that he is unable to pay his expenses, and that he is not a town pauper.

No surgeon, physician, or any other officer connected with the Infirmary, &c. shall derive any emolument from the funds thereof, or from any charity patient, for any services which he may render in his official capacity.

Provided the state of Massachusetts follow the example of New York, and give to the infirmary and hospital one thousand dollars per annum, all state paupers who are invalids shall be received and kept in said infirmary, at the rate of 90 cents a week, and shall receive the same professional attentions and care from nurses, &c. as any other charity patient, and one student from each county in the state, shall be allowed to attend the practice at said infirmary and hospital gratis, on furnishing a certificate from the President of the Medical Society of the county recommending him for that purpose.

MEDICAL DEPARTMENT OF DARTMOUTH COLLEGE.

The autumnal course of medical lectures commences a *fortnight* after the annual commencement, and continues fourteen weeks. Four lectures are delivered daily, upon the different branches. Fees for the course, fifty dollars.

The Anatomical Museum has recently been enriched by the addition of many splendid preparations.

As an important part of the system of medical instruction at Hanover, it is proper to mention the private school of the Professors, in which the pupils, in addition to the *usual means of instruction*, enjoy the benefits of Recitations, on the different branches of medical science; and attend, during the spring and summer, a course of between fifty and sixty ANATOMICAL LECTURES, illustrated by the preparations in the Museum, and short courses on BOTANY and MINERALOGY. This system has now been in operation four years, and the Professors have every reason to be gratified with its results.

The Recitations begin in March, and continue daily till the commencement of the Autumnal Lectures. After which time, the resident pupils, in

addition to their attendance on the exercises of the Medical Class, attend three Recitations in each week, and enjoy other advantages which it would be impracticable to extend to the whole Class.

The fees for the instruction of the private Class are *fifty dollars* per annum; from which, if paid in advance, a reasonable deduction is made.

Resident pupils are entitled to the privileges of resident graduates, and are consequently allowed the use of the *College Library*, and to attend the lectures of the Professor of Mathematics and Natural Philosophy, together with the other public lectures, delivered by the Professors in the Academical department, without additional expense.

There is in the medical department one Vacation in the year, commencing with the close of the Autumnal Course, and containing twelve weeks; and there is a short recess after commencement.

MIDDLEBURY COLLEGE VERMONT.*

The branches taught in the Vermont Academy of Medicine, are,—1st. Chemistry and Natural History: 2d. The outlines of Natural Philosophy: 3d. Anatomy and Physiology: 4th. Surgery, Obstetrics, and the diseases of Women and Children: 5th. Materia Medica and Pharmacy: 6th. Theory and Practice of Medicine: 7th. Medical Jurisprudence.

The course of instruction commences at the Medical College in Castleton, on the first Thursday of September annually, and continues fifteen weeks. There are five Lectures daily, through the whole term, and occasionally six. The matriculation fee, is $3; the fee for all the courses, $40; and the graduation fee, $12.

To be entitled to a degree, the candidate must have arrived at the age of twenty-one years, and have sustained a good moral character—must have studied the different branches of medicine, either in some medical institution, or with some respectable physician and surgeon, for at least three years, including the lecture terms—must have diligently attended two full courses of lectures, on all the several branches, either at this or some other incorporated institution, the last of which must have been at this—must have passed a satisfactory examination before the faculty, and delegates from the Vermont Medical Society, and have delivered and defended a written dissertation on some medical subject, to the approbation of the faculty and delegates—must have obtained certificates from the Treasurer, that he has paid into the treasury the graduation fee, and either paid, or secured to be paid, the prescribed lecture fees.

Having complied with these terms, the candidate shall be entitled to the degree of Doctor of Medicine, unless some sufficient reason appears why he should not be admitted to such honour; and said degree shall be conferred, either at the annual commencement of the Vermont Academy in Castleton, or at that of Middlebury College, at the choice of the candidate.

In this institution, medical instruction is continued through the year, and beside the lecture term, there are two Reading Sessions of fifteen weeks each,—the first commencing the first Monday in January, and the second, the first Wednesday in May. Fees, $12 per term.

During the reading sessions, recitations and examinations, with occasional lectures, will be regularly attended to.

Students will have the use of a large and well selected library, reading rooms and furniture, free of expense, not only in the terms of reading, but during the course of lectures, and vacations, with an opportunity to see as much practice in physic and surgery, as is deemed important, previous to entering on the duties of the profession.

☞The price of board in Castleton, including room-rent, fuel, and washing, varies from $1,25 to $2,00 per week.

* We correct a mistake made in our last No. one hundred and three students attended this institution during the last session. EDS.

WASHINGTON MEDICAL COLLEGE.

The Washington Medical College of Baltimore, will commence its operations, on the last Monday in October next, and continue the usual term of four months. Ample provision is making for the reception and instruction of students. The buildings, now erecting, will be commodious and suitably ornamental. The chemical apparatus will be selected with a special view to the illustration of Medical Chemistry, by a gentleman of distinguished abilities. The anatomical *course*, in addition to the more common anatomy, will be carried with especial care, into the investigation of the system of sympathetic nerves, with a view to illustrate the physiology and pathology of this highly important structure. The surgery will be illustrated by all the apparatus which can be rendered subservient to that end—by particular attention to surgical anatomy, aided by transverse anatomy. The Materia Medica will be supported by specimens of the various articles embraced within its scope.

The following will be the arrangement of Professorships:

HORATIO G. JAMESON, M. D. *Professor of Surgery and Surgical Anatomy.*

SAMUEL K. JENNINGS, M. D. *Professor of Therapeutics and Materia Medica.*

WILLIAM W. HANDY, M. D. *Professor of Obstetrics and the Diseases of Women and Children.*

JAMES H. MILLER, M. D. *Professor of the Theory and Practice of Medicine.*

SAMUEL ANNAN, M. D. *Professor of Anatomy and Physiology.*

JOHN W. VETHAKE, M. D. *Professor of Chemistry and Medical Jurisprudence.*

To satisfy inquiry, as to the authority by which the degree of Doctor of Medicine, may be granted to such students of medicine as shall attend this school, the following extract is given from the Resolutions, passed at Washington, Pennsylvania, on the 25th of April, 1827:

"At the semi-annual meeting of the Board at Washington College, in the state of Pennsylvania, held on Wednesday the 25th of April, Anno Domini, 1827, the following preamble and resolutions were adopted, viz:

"Whereas, Horatio G Jameson, M. D., Samuel K. Jennings, M. D., William W. Handy, M. D., J. H. Miller, M. D., and Samuel Annan, M. D. members of the Medical Faculty of the state of Maryland, and practitioners of medicine in the city of Baltimore, have associated for the purpose of establishing in the said city a Medical School, in which it is proposed that full courses of lectures shall be given in all the departments of Medical Science usually taught in Medical Schools.—And whereas, the members of said association have made a proposal for an agreement with this Board, whereby the degree of Doctor of Medicine, may be conferred upon such medical students as may be deemed worthy of such distinction: Therefore,

"*Resolved*, That this Board, reposing full confidence in the professional qualifications and moral integrity of the members of the said association, will confer the title and degree of Doctor of Medicine, on all such gentlemen as the said members of the said association or their successors, after thorough examination, may recommend."

Each Professor in this College, will lecture six times every week. The charges will be $15 for each ticket—In addition to which, there will be required a matriculating fee, of five dollars.

Two full *courses* will be required of candidates for degrees, but a course in any other respectable Medical College will be considered equivalent to one in this. The price of Diplomas will be $10. No charge will be made for the dissecting rooms.

SAMUEL K. JENNINGS, *Register,*
of the Medical Faculty.

(CIRCULAR.)

The *Medical Society of South Carolina*, under whose auspices a southern School of Medicine has been recently established, participating in common with their fellow-citizens of the United States, in the zealous endeavours which they are every where making to improve the departments of science, and to exalt the character of the human intellect, are desirous of testifying their generous sense, also of the spirit and feeling which have prompted to it. They feel that while every other denomination of men are rapidly on the advance—eagerly, and emulously engaged in extending the boundaries of their future usefulness, and augmenting the requisitions of their future eminence—to be spectators of these great and inspiring scenes, and not to catch a spark of the flame which is enkindled, is to be unworthy of the age in which they live, and of the dignity and station, which, as a class of individuals, society has already awarded them. They would therefore, further manifest the sincerity of their emotions by endeavours also to raise the standard of excellence in that to which they belong—they would go on with the moving and swelling current—they would lay a similar foundation for the greater elevation of our common fame.

Among the several means by which they expect this cheering undertaking and inviting purpose to be accomplished, they have ever regarded, as they do still continue to regard, the Medical institutions of our country as possessing and exercising a predominent if not an almost omnipotent sway—they consider them as the mighty engines, which, according as they are well or ill directed, will promote or retard the happy progression.

Viewing them in this light, and actuated by sentiments in which they feel that every enlightened citizen will join with a warm and voluntary accordance, they beg leave to solicit your earnest and earliest co-operation to these their proposals for amendment.

They believe it unnecessary to dwell upon the existence of the many and growing evils which attend the relaxed and discrepant regulations, by which they are now generally governed—these, it is believed, are fully understood and generally acknowledged. They believe also that the readiness on your part to amend them, only waits for some general proposal, which, by being unanimously adopted, shall render the undertaking extensive and efficient—that there is not an individual among the Faculty who does not *intimately* feel, that it is imperiously called for by the enlightened sentiments of modern times.

But while they refrain from enumerating each particular evil as it exists, and the reasons, in detail, which call for amelioration, they cannot omit to bring to your attention, what in their estimation at least, appear to be the *fundamental sources* from which all of them arise; for, upon the distinct apprehension of these, they conceive the remedies which are to be applied, must turn.

The first, they are of opinion, exists *on the part of the students*, and is owing to the general want of a preliminary classical education: the second, *on the part of the Institutions;* and arises from the shortness of each course of lectures, and the number of courses necessary to entitle a candidate to examination for a degree, being entirely too few.

To put a stop to the unjust, vexatious and mischievous consequences, to which these principles have led, they therefore respectfully submit for your deliberation and acquiescence, the following regulations:

First—That no applicant shall be admitted to attendance upon a course, or to become a candidate for graduation, who is not willing to stand an examination, touching his qualifications as a classical scholar, and to give satisfactory evidence of his competence therein, or who cannot otherwise produce the ordinary college testimonials concerning the same.

Second—That the term of each course of lectures, be extended to five

months; and not less than three courses be required of each candidate to entitle him to an examination; provided, it be enjoined upon him for the first year, to attend the lectures of the Professors of Anatomy, Chemistry, and a course of dissections only; and provided also, that it shall not be required of him to pay for the tickets to any of the lectures for more than two courses each.

Third—That the examinations be conducted publicly and openly.

It is believed that this measure will remove all suspicion of an improper bias; and tend more than any other, to bring forward none but those who will bear with them the highest presumptions of their adequacy.

Fourth—That three medals be annually offered for the best Greek, Latin and English Thesis.

Fifth—That a certificate be required in every instance of every candidate for a degree, showing satisfactorily that he has attained to the age of 21 years.

In offering the above to your consideration, it is at the same time due to the Berkshire Medical institution, to state that while the committee were deliberating upon this communication, a circular was handed to them through one of the Faculty of the Medical College of this place, from their Dean, recommending the appointment of Delegates to a National or General Convention. To this latter proposal, if practicable, the Society acquiesce, but in the mean time would submit for the deliberation of your Board, the foregoing regulations.

THOMAS Y. SIMONS, M. D.
JOSEPH JOHNSON, M. D.
THOMAS G. PRIOLEAU, M. D.
JAMES MOULTRIE, Jun. M. D.
SAMUEL HENRY DICKSON, M. D.

Too much praise cannot be awarded to the medical profession in the New-England states, and South Carolina for the laudable exertions they are making, to render the profession more respectable; we trust that the exertions will become general in our country, and that a national convention will be speedily called, for the adoption of such measures, as will make diplomas what they were originally intended to be, viz. a passport of qualification to the practice of an important profession.

From the rapid increase of medical schools, and the inducements held out to *make Doctors*, we are persuaded many engage in the profession who otherwise would not; and the manner in which the degree of M. D. is conferred in some instances, we assert, is not only disgraceful to our profession, but an imposition upon the public. We regret if our remarks should appear too general, because we are well aware that out of the number of candidates, many are well prepared by talent and education, to practise their profession with honour to themselves, and to their alma-mater.

As the oldest medical school in our country, we hope the trustees and professors of the University of Pennsylvania, viewing with interest the exertions which are making in the different sections of the union, will regard the present as a proper time to call a national convention, and thus aid in adopting such measures as will place the profession on a more respectable footing.

Perhaps some of our medical institutions may be displeased with our observations. We can say that we are prompted only by the interests of science and humanity—in this cause, we shall continue to expose errors, &c., in whatever quarter they may appear.—*Eds.*

MEDICAL INTELLIGENCE OF GEORGIA.

A Medical Board was established in this state by the legislature preceding the present, for the purpose of examining those persons who wish to commence the practice of medicine, after the passage of the law, exempting those from an examination, however, who may graduate at any respectable medical school, but requiring them still to obtain a license from the board. The board hold their meetings annually, on the first Monday in December, at Milledgeville. The first convention was held on the first Monday of the present month, (December,) when the following persons were elected officers of the board.

Milton Anthony, M. D. of Augusta, *President*. Benjamin A. White, M. D. of Milledgeville, *Secretary*. Alexander Jones, M. D. of Lexington, *Dean*.

The members of the board, besides the officers just named:—

Dr. T. Fort, Dr. Graham, of Salem, Clarke county. Dr. O. C. Fort, of Twiggs. Dr. Daniel, Dr. Screven, of Savannah. Dr. Dent, Dr. Watkins, of Augusta. Dr. Richardson, of Elbert. Dr. Weems, of Washington. Dr. West, of Darien. Dr. Baber, of Macon. Dr. Hamilton, of Clinton. Dr. Gerdine, of Clarke county. Dr. Harlow, of Waynesboro'. Dr. Gorman, of Forsyth. Dr. Powell, of Monticello. Making in all twenty members: seven forms a quorum. During our late meeting thirteen members attended.

The board adopted a rigid examination as the surest means of elevating the profession in the state, and doing justice to the applicants and the community; thirteen received license to practise physic, of those examined, besides a number of graduates. The following extracts from the *by-laws* adopted by the board, will illustrate the policy intended to be pursued in future.

"1. Applicants for examination shall be required to write and present a thesis on some medical subject, and hand the same to the dean, on or before each annual meeting of the board.

"2. The board of physicians will require of each candidate a competent knowledge of chemistry, materia medica, anatomy, physiology, surgery, midwifery, and the theory and practice of medicine, and will not grant a license to any candidate materially deficient in any of those branches.

"3. In future, applicants having diplomas, shall be expected to send them to the board of physicians for examination, and that in no case shall a temporary or permanent license be granted, upon the testimony of a member of this board, or any individual without the diploma.

"4. A re-examination will be granted by the board to rejected applicants, on the *sole condition* that the second examination be held publicly, and the questions and answers recorded on the minutes."

The order of examination will be so conducted as to commence with the first name on the list, and proceed numerically, until the list is gone through, and if any applicant is absent when his presence is required by the board, the next shall be presented in his place, and the name of the absentee placed at the bottom of the list. Letters addressed to the dean, in Lexington, Georgia, post paid, requesting their names enrolled, with residence and title of thesis, will be duly attended to.

At the close of the session of the board of physicians, a central Medical Society of Georgia was formed, and the following by-laws were adopted, with other proceedings thereupon.

By-Laws of the Central Medical Society of Georgia.

Art. I. The objects of the Society shall be the cultivation of medical science, and its collateral branches.

Art. II. The society shall be composed of the members of the board of physicians, and such others as may be from time to time admitted, not exceeding forty in all.

Art. III. The officers of the society shall be a President, two Vice Presidents, a Secretary, and Treasurer.

Art. IV. The regular meetings of the society shall be held annually at the seat of government, immediately on the close of the annual session of the board of physicians.

Art. V. Physicians distinguished for their zeal and acquirements in the profession, may be elected to honorary membership.

On motion, Dr. MILTON ANTHONY, M. D. of Augusta, was appointed chairman, *pro tem.* and ALEXANDER JONES, M. D. of Lexington, Georgia, Secretary *pro tem.*

On motion, it was *Resolved*, That the society proceed to elect ten permanent members, in addition to the members of the board of physicians now composing the Society.

Whereupon the following gentlemen were proposed and elected, viz: Dr. H. Hull, of Athens, Geo. Dr. R. Banks, of Elbert county, Geo. Dr. William R. Wearing, of Chatham county, Geo. Dr. Boykin, of Baldwin county, Geo. Dr. Foster, of Green county, Geo. Dr. William A. Brown, of Monroe county, Geo. Dr. Law, of Monroe county, Geo. Dr. D. A. Reese, of Jasper county, Geo. Dr. Walker, of Morgan county, Geo. Dr. Branham, of Putnam county, Geo.

On motion, *Resolved*, That the secretary address a letter to each of the above gentlemen, stating to them the objects of the society, and request their co-operation, and solicit an answer, stating whether they will accept the appointment.

The society was adjourned until meeting in course.

The above proceedings are only intended as the embryo of the society. It is intended to admit those young men who apply to the board for licenses, and receive them, as junior members of the same, and on further evidence of medical reputation, either by graduation, or some years of successful practice in the profession, to admit them to honorary membership. It is proposed to be on the footing of the General State Medical Society, &c.

Medical Journals and Newspapers throughout the Union, will confer a favour by publishing the above, and oblige a

CORRESPONDENT.